

# Middle School Geography

FOR  
INDIAN SCHOOLS

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THIRD EDITION  
Revised and Enlarged

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WITH MAPS AND DIAGRAMS

ALLAHABAD :  
RAM DAYAL AGARWALA

1913





## PREFACE.

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This little book is a stepping-stone to my 'Matriculation Geography.' The syllabus laid down in the Curriculum of studies has been strictly followed in the preparation of the work. The language has been made as simple as possible so as to be readily intelligible to junior students. The usual maps and diagrams have been supplied, and a set of examination questions put at the end of each chapter. Geography must primarily be taught from maps ; and I trust teachers will insist on their pupils' verifying from a map every statement they read or reproduce.

ALLAHABAD : }  
*May, 1908.* }

A. C. M.

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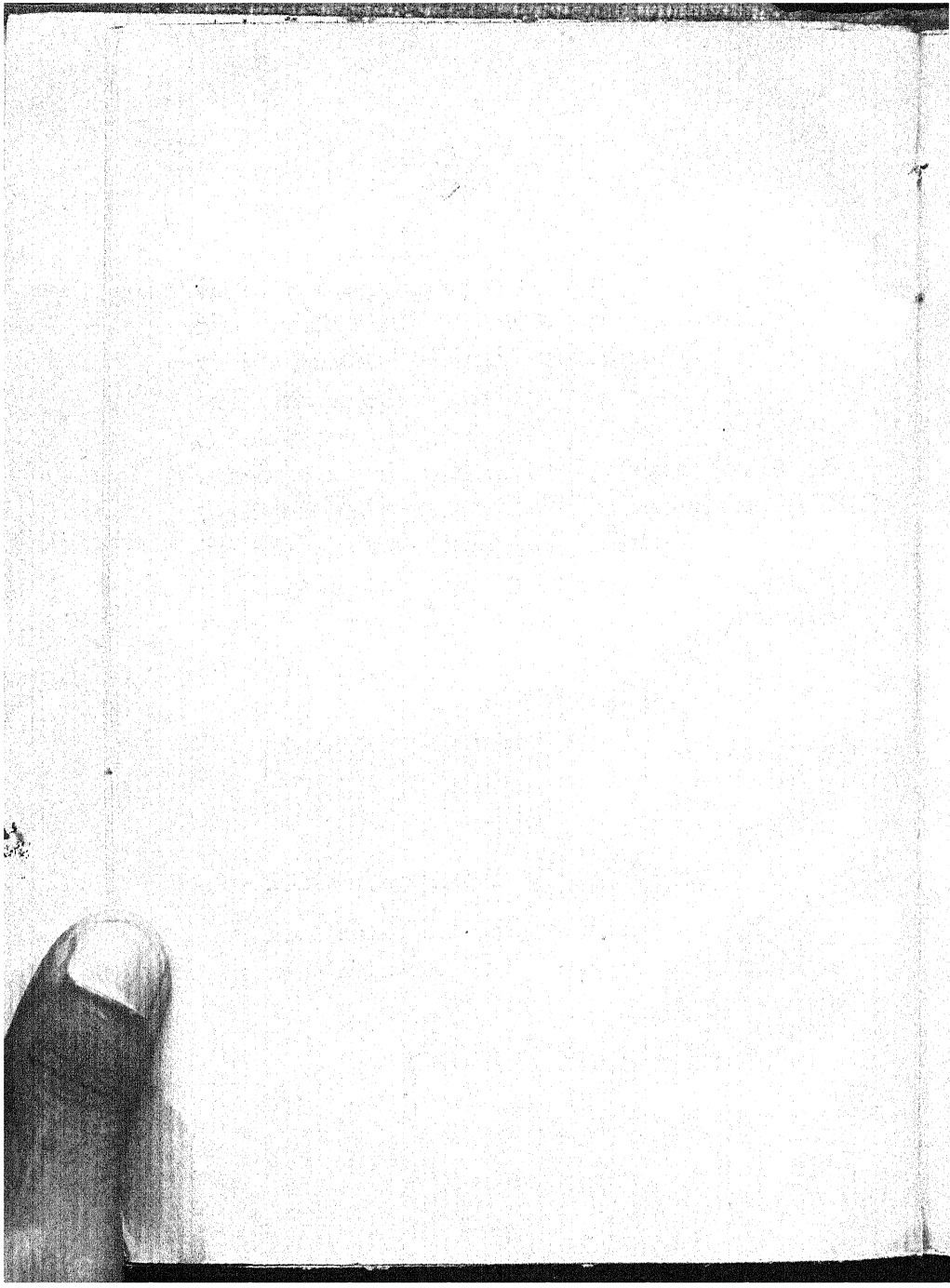
### PREFACE TO THE THIRD EDITION.

I have carefully revised the whole book and brought it up to date. The census figures are those of 1911.

MIR C. COLLEGE, ALLAHABAD :

*July 7, 1913.*

} A. C. M.



# CONTENTS.

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	PAGE
INTRODUCTION ... ..	1
<b>Part I.—Physical Geography ... ..</b>	<b>3</b>
CHAPTER I.—THE EARTH IN RELATION TO THE HEAVENLY BODIES ... ..	3
" II.—SHAPE OF THE EARTH ... ..	5
" III.—DIFFERENCES IN HEAT AND COLD DUE TO THE SPHERICAL SHAPE OF THE EARTH ... ..	8
" IV.—MOTIONS OF THE EARTH AND THEIR EFFECTS ... ..	10
" V.—THE EARTH'S SURFACE ... ..	17
" VI.—THE OCEAN ... ..	21
" VII.—THE FIVE OCEANS ... ..	23
" VIII.—MOTIONS OF THE SEA ... ..	26
" IX.—THE ATMOSPHERE ... ..	33
" X.—WINDS ... ..	36
" XI.—MOISTURE IN THE AIR ... ..	39
" XII.—CLIMATE ... ..	45
" XIII.—CIRCULATION OF WATER ON THE LAND ... ..	46
" XIV.—THE INTERIOR OF THE EARTH ... ..	50
" XV.—LATITUDE AND LONGITUDE ... ..	52
" XVI.—MAPS AND MAP-DRAWING ... ..	56
<b>Part II.—General Geography ... ..</b>	<b>59</b>

## BOOK I.—INDIA.

CHAPTER I.—BOUNDARIES, SIZE, AND SHAPE ... ..	61
" II.—NATURAL DIVISIONS OF INDIA ... ..	62

	PAGE.
CHAPTER III.—THE CLIMATE AND SEASONS OF INDIA	67
" IV.—THE CHIEF PRODUCTS OF INDIA ...	68
" V.—THE ANIMALS OF INDIA ...	70
" VI.—THE PEOPLE OF INDIA ...	71
" VII.—GOVERNMENT AND POLITICAL DIVISIONS OF INDIA ...	74
" VIII.—THE UNITED PROVINCES OF AGRA AND OUDH ...	76
" IX.—BENGAL ...	80
" X.—BEHAR AND ORISSA ...	82
" XI.—THE CENTRAL PROVINCES AND BERAR	85
" XII.—THE MADRAS PRESIDENCY ...	88
" XIII.—THE BOMBAY PRESIDENCY...	90
" XIV.—THE PUNJAB ...	93
" XV.—THE NORTH-WEST FRONTIER PROVINCE ...	96
" XVI.—BRITISH BELUCHISTAN ...	97
" XVII.—AJMERE-MERWARA ...	98
" XVIII.—COORG ...	98
" XIX.—THE NATIVE STATES OF INDIA ...	99

## BOOK II.—ASIA.

CHAPTER I.—BOUNDARIES AND EXTENT	105
" II.—PENINSULAS, SEAS AND GULFS, AND ISLANDS ...	106
" III.—MOUNTAINS AND RIVERS ...	107
" IV.—THE PEOPLES OF ASIA ...	109
" V.—THE CLIMATES OF ASIA ..	111
" VI.—POLITICAL DIVISIONS ...	112
" VII.—THE ISLANDS OF ASIA ...	114
" VIII.—INDO-CHINA AND THE ISLANDS OF THE EASTERN ARCHIPELAGO ...	115
" IX.—THE CHINESE EMPIRE ...	118

	PAGE.
CHAPTER X.—THE JAPANESE EMPIRE ...	120
„ XI.—ASIATIC RUSSIA ...	121
„ XII.—ASIATIC TURKEY, ARABIA, PERSIA, AFGHANISTAN, AND BELUCHISTAN	123

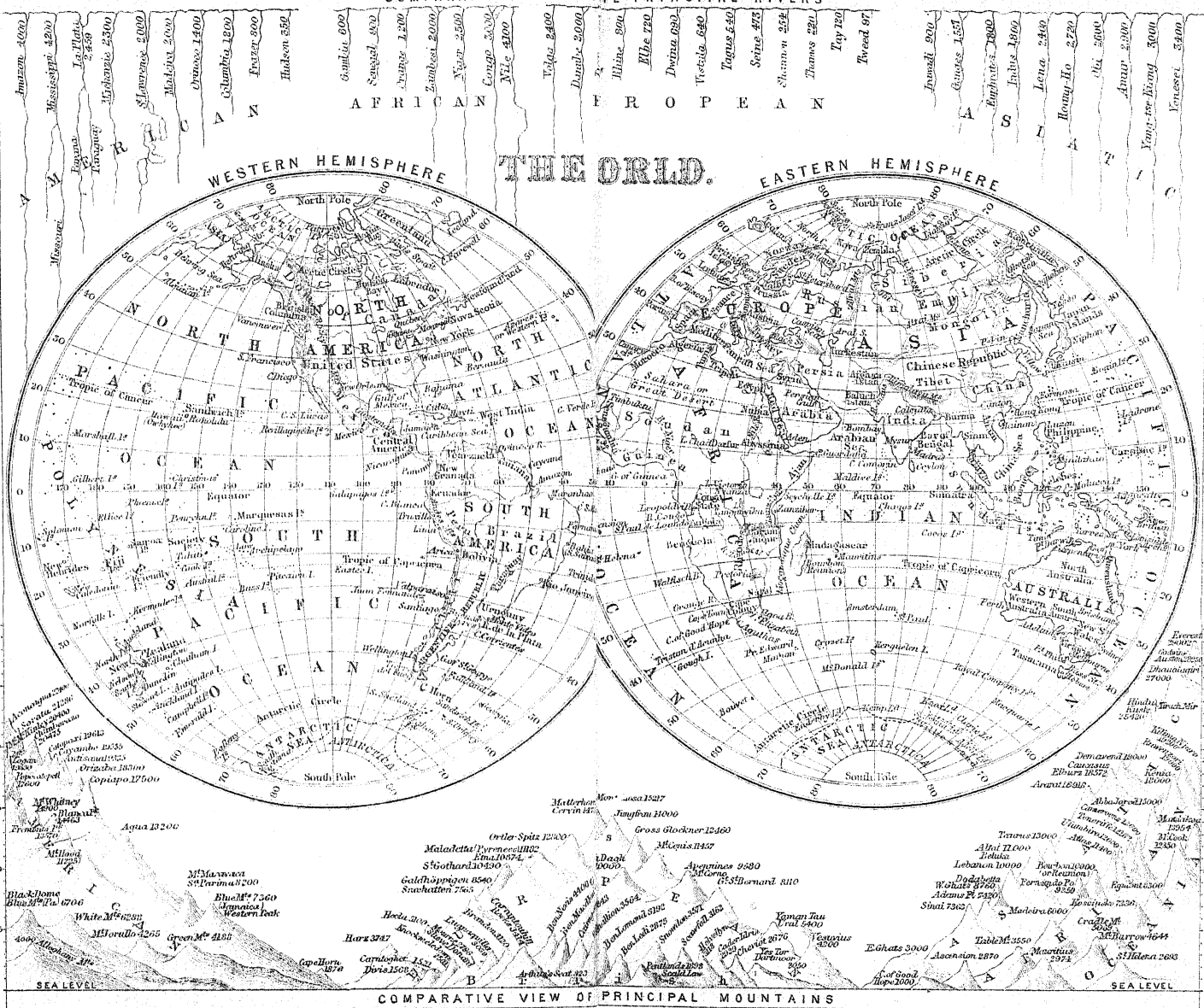
### BOOK III.—EUROPE.

CHAPTER I.—BOUNDARIES AND EXTENT ...	129
„ II.—PENINSULAS, SEAS AND GULFS, AND ISLANDS ...	130
„ III.—MOUNTAINS, RIVERS, AND LAKES	132
„ IV.—THE PEOPLES OF EUROPE ...	134
„ V.—THE CLIMATE AND RAINFALL OF EUROPE ...	135
„ VI.—POLITICAL DIVISIONS ...	136
„ VII.—THE BRITISH ISLES ...	136
„ VIII.—OTHER EUROPEAN COUNTRIES ...	142

### List of Maps.

1. The World ...	... To face Page	1
2. India ...	„	61
3. Asia ...	„	105
4. Europe ..	„	129

## COMPARATIVE VIEW OF THE PRINCIPAL RIVERS





# MIDDLE GEOGRAPHY.

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## INTRODUCTION.

1. **What Geography teaches.**—The word 'Geography' comes from two Greek words, *ge* = 'the earth,' and *graphie*, = 'description,' and means therefore 'a description of the earth.' But by usage the term is generally applied to the science which deals with the description of the earth's *surface*. It does not concern itself with anything *below* the earth's surface, for that forms the subject-matter of another science—Geology. Geography may therefore be defined as *the knowledge of the distribution of phenomena on the surface of the Earth considered as the abode of man*.

It is indeed true that some facts regarding the interior of the Earth are treated of in Geography, such as volcanoes, springs, earthquakes, &c., all of which are caused by forces working below the surface of the Earth. But Geography takes account of these phenomena only so far as they appear *above* the surface, and does not study them in detail, which it leaves to Geology.

2. **Importance of Geography.**—Geography is one of the most important of the physical sciences. It is of great use not only to the soldier, the sailor, the missionary, and the traveller, who have to go from place to place, or to the merchant who has trade dealings in distant lands, but even to the ordinary man. Many of



the events which concern us at the present day are of geographical interest, and the daily newspaper acquires a fuller and fresher charm when read in this light. Even to know where the places one reads of are situated, what is their climate, and how they are peopled, is something useful in itself. Without a knowledge of Geography, progress and civilization would have been impossible, for these are mainly the result of free intercourse between the people of different countries.

3. **Divisions of Geography.**—Modern Geography is divided into two chief branches: (1) Physical Geography; and (2) Political Geography. The former deals with the various *natural* features of the Earth's surface, such as its size and shape, its rivers and mountains, its soil and climate. The latter treats of the *artificial* division of the Earth's surface into different countries, their extent and population, their government, their products and industries, their trade and commerce.

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## PART I. PHYSICAL GEOGRAPHY.

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### INTRODUCTION.

Physical Geography treats of the outward phenomena of the Earth, such as the division of its surface into land and water, the formation of the Earth's crust, the Ocean and the Atmosphere and their various movements, the distribution of plant and animal life upon the Earth's surface, and all those forces that tend to change the Earth's surface and to make it what it is. But the Earth is not all. It is only one of many heavenly bodies that occupy space, and bears definite relations with those other heavenly bodies, the chief of which are the Sun and the Moon. In studying Physical Geography, therefore, it is essential to know that this *earthly* Earth of ours is really a *heavenly* body, bearing close relations with the Sun, the Moon, and the Stars, which we acknowledge to be heavenly bodies.

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### CHAPTER I. THE EARTH IN RELATION TO THE HEAVENLY BODIES.

1. **The Solar System.**—The Earth is a heavenly body moving round the Sun along a fixed path, which is called its *orbit*. It is not an isolated body, but forms part of a group of heavenly bodies, collectively called the **Solar System**, the members of which are united in one beautiful and harmonious whole by the force of

gravitation.\* Of the heavenly bodies that make up the Solar System, the Sun, the Moon, and the Earth are the most important.†

2. **The Earth's relation to the Sun.**—The Sun, which forms the centre of the Solar System, is  $1\frac{1}{2}$  million times the size of the earth, and is 93 million miles distant from the earth.

3. **The Earth's relation to the Moon.**—The Moon is a planet revolving round the Earth, and is much smaller than it, being  $\frac{1}{49}$ th of its size. It is 240,000 miles distant from the Earth. It has no light of its own, but shines with the reflected light of the sun.

4. **Time taken by the Moon's revolution round the Earth.**—The time taken by the Moon to go round the Earth completely is 27 days, 8 hours; but a larger time, namely, 29 days, is required to bring her twice in succession in front of the sun, so as to give us what we call the "full moon" (or *Pūrnamāshi*). The reason of this is that while the Moon is revolving round the Earth, the Earth too is moving along its own path.‡ Hence, in order to return to a position exactly opposite the sun, the Moon has to travel a bit longer than one complete revolution of the Earth and the time taken in doing so is  $29\frac{1}{2}$  days, which is the length of one **lunar month** (or a month according to the Hindu *tithi* system of calculation).

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\* Gravitation is a kind of natural force by which all bodies or particles of matter in the universe attract one another.

† The eight principal planets of the Solar System are:—Mercury, Venus, Earth, Mars, Saturn, Uranus, and Neptune.

‡ The path of a planet (or wandering star) round the sun is called an *orbit*.

### QUESTIONS.

1. Define Geography.
2. What is the importance of Geography as a branch of knowledge?
3. Into how many parts may Geography be divided? Name them and define them.
4. What is the Solar System?
5. What relation does the Earth bear to the Sun?
6. What kind of heavenly body is the Moon? What is its size and distance from the Earth?
7. How is it that a lunar month is longer than the time of one complete revolution of the Moon?
8. What is meant by the Earth's *orbit*?

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## CHAPTER II.

### SHAPE OF THE EARTH.

The Earth is, in shape, like a round ball flattened at the top and bottom. It is not a flat disc as was erroneously believed in former times.

#### Proofs of the spherical form of the Earth.

(1) A larger portion of the Earth's surface is visible from a height than from a plain.

(2) As a ship nears the coast, the tops of mountains become visible first, and lower grounds afterwards.

(3) As a ship sails away from harbour, the spectator on the coast loses sight of the low hull first, and then the tall masts. Similarly in the case of a ship coming into harbour, the spectator catches sight of the masts first, and then, the hull. Now, if the Earth were flat, the big hull would be visible longer and sooner than the slender masts. Hence it is the *curved* surface of the

Earth which obstructs our view, as will be seen from the following diagram :—

Fig. 1.

DIAGRAM TO ILLUSTRATE THE SPHERICAL FORM OF THE EARTH.



(4) The shadow which the Earth casts on the moon, during an eclipse, is always circular, thus showing that the Earth is spherical in form.

(5) The horizon at sea or on a level plain is always circular.

(6) By sailing constantly in one direction, whether due east or due west, we shall return to the place from which we started. This has actually been found to be the case by many navigators, and proves that the Earth is round.

(7) The fact that it is day at some parts of the Earth when it is night at other parts, proves that the Earth is round, for if the Earth were flat the Sun would have lighted all parts of its surface at one and the same time.

(8) In cutting for a canal, or constructing a railway line, it is found that allowance must be made for a dip of about 8 inches per mile, in order to attain a uniform level, thus showing that the Earth's surface is continually curving away.

But even after all these proofs it seems very hard to imagine how an irregular surface, full of high mountains and deep valleys,

can form part of a regular curve. The explanation is that the earth is so vast in size that even the highest mountains are, in comparison, merely like little grains on its surface.

### Definitions of Geographical Terms.

(1) The **Axis** is an imaginary line drawn through the centre of the Earth, about which the Earth rotates.

(2) The **Poles** are the two extremities of the Earth's axis, north and south.

(3) The **Equator** is an imaginary great circle drawn round the Earth, exactly midway between the poles.

(4) A **Meridian** is a great circle which, passing through the Poles, cuts the Equator at right angles.

The **Meridian of any place** is a great circle which passes through that place, and through the poles, and cuts the equator at right angles.

*N. B.*—A *Meridian* (or "mid-day line") is so called because it passes through every place which has midday at the same moment.

(5) The **Parallels of Latitude** are small circles, drawn parallel to the equator.

(6) The **Horizon** is a vast circle, seen around us where the earth and sky seem to meet.

(7) The **Zenith** is that point in the heavens which is directly over our head. The opposite point, which is directly under our feet, is called the **Nadir**.

(8) The opposite side of the Earth from us is called our **Antipodes**, (Gr. *anti*, against, and *podes*, feet) because people walking upon the Earth at that point have their feet turned towards ours—so that the Zenith at the Antipodes is our Nadir, and our Zenith is their Nadir.

## QUESTIONS.

1. What is the exact shape of the Earth, according to modern Geography? What was the Earth's shape formerly believed to be?

2. Give as many proofs as you can to show that the Earth is spherical in form. Illustrate your statements by means of a diagram or diagrams.

3. How can the Earth's surface, which is full of high mountains and deep valleys, form part of a regular curve? Can you offer any explanation of this?

4. Define—

Axis, Pole, Equator, Meridian, Parallels, Horizon, Zenith and Nadir, the Antipodes.

5. What is a meridian and why is it so called? What do you understand by the meridian of any place?

6. What is the *Antipodes*, and why is it so called?

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CHAPTER III.**DIFFERENCES IN HEAT AND COLD CAUSED BY THE SPHERICAL SHAPE OF THE EARTH.**

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1. **Why different parts of the Earth have different degrees of Heat and Cold.**—One result of the spherical form of the Earth is that different parts of its surface have different degrees of heat and cold. The Earth's surface being curved, the sun's rays do not strike with equal force upon every part of it, as would have been the case if it had been a flat plain. Every part would then have been equally hot and cold. But as it is, the sun's rays fall straight down only upon that part of the earth which is midway between the two Poles (the Equator); and it is here, therefore, that the heat is greatest. But over those parts where the Earth's surface curves



away towards the Poles, the sun's rays can only fall slantingly, and these parts are therefore much cooler. Hence we find great varieties of climate in different parts of the Earth.

2. **The Five Zones.**—This variation in temperature on the Earth's surface which is due to the spherical form of the Earth, has led Geographers to divide the Earth's surface into five climatic **Zones** \* as follows :—

(1) **The Torrid Zone**, which goes round the centre of the globe on both sides of the equator, and is bounded by two imaginary lines, the **Tropic of Cancer** on the north, and the **Tropic of Capricorn** on the south. This is the *hottest* part of the Earth.

(2) **The North Temperate Zone**, to the north of the Tropic of Cancer.

(3) **The South Temperate Zone**, to the south of the Tropic of Capricorn. These two Zones enjoy a moderate climate, neither very hot nor very cold.

(4) **The North Frigid Zone**, stretching from the north border of the North Temperate Zone to the North Pole. (The line which separates this zone from the North Temperate Zone is called the **Arctic Circle**).

(5) **The South Frigid Zone**, stretching from the south border of the South Temperate Zone to the South Pole. (The line which separates this Zone from the South Temperate Zone is called the **Antarctic Circle**.) These two zones are the *coldest* parts of the Earth's surface.

*N.B.*—The two Frigid Zones are also called the *Polar Regions*, and these are the coldest parts of the earth

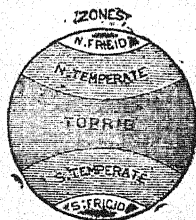
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\* Parts of the Earth having the same kind of climate are called **Zones** (= belts) because they go round the globe like belts.



Fig 2.

THE FIVE ZONES.




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### QUESTIONS.

1. Why are there differences in heat and cold over different parts of the Earth's surface? Explain this fully.
2. How are differences in temperature produced by the curvature of the Earth's surface?
3. Which is the hottest, and which the coldest, part of the Earth's surface?
4. Into how many parts has the globe been divided according to climate? Name them and point out the extent of each.
5. Why are the climatic divisions of the Earth's surface called *Zones*?
6. What are the *Arctic* and the *Antarctic Circles*?
7. What are the *Tropic of Cancer* and the *Tropic of Capricorn*?
8. What part of the Earth is called the *Polar Regions*?

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### CHAPTER IV.

#### MOTIONS OF THE EARTH AND THEIR EFFECTS.

The Earth performs two important movements : (1) a spinning (daily) motion upon its own axis, called *rotation* ; and (2) a circular (yearly) motion round the Sun, called *revolution*. Both these movements are going on together constantly.

**I—The Earth's Diurnal motion : Rotation.**

The Earth's diurnal or day-to-day motion round its own axis, is called *rotation*.

1. **Time taken in Rotation.**—The time taken in rotation is 24 hours, *i. e.*, one full day. Hence rotation is also called the *diurnal* (daily) motion of the Earth.

2. **Speed of Rotation.**—The speed of the Earth's rotation varies at different parts, being *nil* at the Poles, and greatest at the equator, where it is about 1000 miles an hour.

3. **Direction of Rotation.**—The direction of the Earth's rotation is from west to east. Hence we on earth feel that the sun is moving in the opposite direction—from east to west. The fact is that the sun does not move at all, but it seems to us to be moving, in the same way as when travelling in a railway train the telegraph posts and trees appear to be quickly moving in the opposite direction.

4. **Result of Rotation : Succession of Day and Night.**—The effect of the Earth's rotation is the succession of day and night. Since the Earth is a globe, the sun can shine on only one-half of it at one time ; and so half the globe is in darkness while the other half is in light. As the earth turns round on its axis, every part of its surface is successively brought before the sun, and, after a time, removed from it. When our side of the earth is facing the sun, we call it *Day*, and when it is away from the sun, we call it *Night*.

The phenomenon of the succession of Day and Night can be easily illustrated by means of an ordinary school-globe and a lamp.

**II.—The Earth's Annual Motion : Revolution.**

The Earth's annual motion round the sun is called *revolution*.

**1. Time taken in Revolution.**—The time taken by the Earth to perform one complete revolution round the sun along its fixed path (or *orbit*) is  $365\frac{1}{4}$  days, *i.e.*, one whole year.

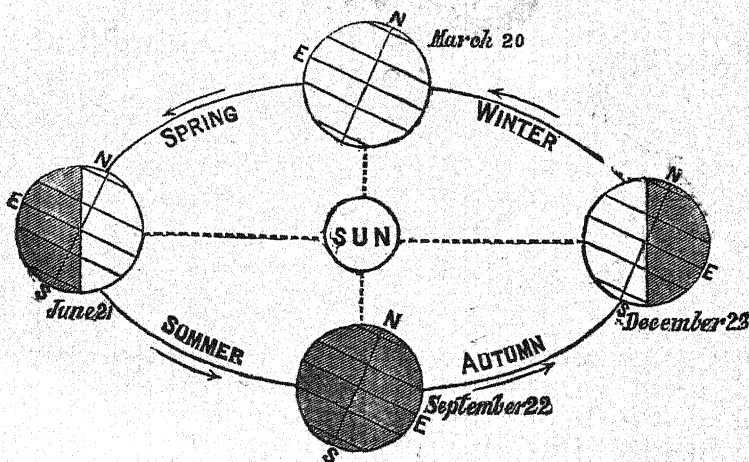
*N. B.*—As it is not convenient to count the  $\frac{1}{4}$ , it is left out, and a year is made to consist of 365 days. But every four years, an additional day (February 29th) is put in, to make up for the four quarters thus left out of account. The year with the extra day is called a *Leap Year* (or *Mala-más*.)

**2. Proof of the Earth's Revolution.**—The Earth's revolution round the sun is proved by the fact that we see different stars overhead at night at one time of year from what we see at another. The stars are fixed, it is the Earth that is moving.

**3. Result of Revolution: Change of Seasons.**—The Earth's revolution round the sun causes the change of seasons known as summer, winter, spring, and autumn. To understand this, we must first learn that the earth's axis is not perpendicular to the plane of its orbit, but slightly bent, so as to make an acute angle. This inclination or bend is, however, always in the same direction. The North Pole and the South Pole are thus sometimes inclined *towards* the sun, and sometimes *away from* it. When the North Pole points towards the sun, the northern hemisphere gets more heat than the southern, and the result is that there is summer in the northern half of the world, and winter in the southern. Similarly, when the South Pole points towards the sun, the southern hemisphere gets more heat than the northern, and the result is that there is summer in the southern half of the world, and winter in the northern. Between these two positions occur spring and autumn.

Fig. 3.

DIAGRAM TO ILLUSTRATE THE SEASONS.



4. **The two Equinoxes.**—The position of the Earth's axis with regard to the sun changes gradually all the year round, during the revolution of the Earth round the sun. Twice every year, the position of the axis is such that both the northern and southern hemispheres receive equal quantities of heat from the sun, and day and night are of equal length all over the world. These occasions are called the **Equinoxes\***, one of which occurs in spring on March 20th, and is called the **Vernal Equinox**; the other occurs in autumn on September 22nd, and is called the **Autumnal Equinox**.

5. **Midsummer and Midwinter.**—After the Vernal Equinox, the northern hemisphere begins to receive more heat, and the days in that part of the world gradually grow longer, until about June 21st they are longest.

\* The word 'Equinox' is derived from *equi*, equal, and *nox*, night.

The period round June 21st is therefore called **Midsummer**. From that date, the days begin to grow shorter, until at autumnal equinox days and nights are of equal length again. After that, the nights grow longer than the days, till about the 23rd of December, days are shortest and nights longest. The period round December 23rd is therefore called **Midwinter**.

In the southern hemisphere the reverse of this process goes on, so that midsummer falls in December and midwinter in June.

6. **The two Solstices.**—The changes in the length of day and night, that go on during the year, correspond with certain apparent movements of the sun. During the first half of the year (January to June), the sun ascends higher in the sky every day. At the vernal equinox, he is highest at noon over the equator. On midsummer day, he shines directly over the Tropic of Cancer. Here he seems to stay for a few days, and hence this time of the year is called the **Summer Solstice**.\* The sun then begins to descend in the sky, till at the autumnal equinox he is again over the equator. On midwinter day, he shines directly over the Tropic of Capricorn. Here he again seems to stay for a few days, and so this time of the year is called the **Winter Solstice**.

In the southern hemisphere the reverse of this process goes on: the summer solstice occurring when the sun shines on the Tropic of Capricorn, and the winter solstice, when he is on the Tropic of Cancer.

The principal facts connected with the change of seasons are clearly shown in the three tables that follow :

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\*The word *Solstice* is derived from Lat. *sol*=the sun, and *sto*=I stand.

## I.—The Seasons.

Inclination of the Pole.	Resulting season in Northern Hemisphere.	Resulting season in Southern Hemisphere.	Inclination of the Pole.	Resulting season in Northern Hemisphere.	Resulting season in Southern Hemisphere.
North Pole inclined <i>towards</i> the sun :	Summer.	Winter.	North Pole inclined <i>away from</i> the sun :	Winter.	Summer.
South Pole inclined <i>away from</i> the sun.			South Pole inclined <i>towards</i> the sun.		

## II.—Length of Day and Night.

Date	Name of Season.	Length of Day.	Length of Night.	Remarks.
20th March	Vernal Equinox	Equal.	Equal.	From this date days grow longer and nights shorter.
21st June	Midsummer.	Longest day.	Shortest night	Day growing shorter, night longer.
22nd September	Autumnal Equinox.	Equal.	Equal.	Ditto
23rd December	Midwinter.	Shortest day.	Longest night.	Day growing longer, night shorter.

## III.—Position of the Sun.

Name of Season.	Position of the Sun.	Quarter of the Globe.
(1) <i>Motion towards the North.</i>		
Vernal Equinox (March 20.)	In the Zenith ...	On the equator.
Midsummer day (June 21.)	Vertical ...	Tropic of Cancer [Here comes the summer solstice.]
(2) <i>Motion towards the South.</i>		
Autumnal Equinox (September 22)	In the Zenith ...	On the equator
Midwinter day (December 23.)	Vertical ...	Tropic of Capricorn [Here comes the winter solstice for the northern hemisphere.]

## QUESTIONS.

1. What two movements does the Earth perform? What is the effect of each?
2. Distinguish between the *Rotation* and *Revolution* of the Earth.
3. Explain the phenomenon of the succession of day and night.
4. Why do we feel the sun to be moving from east to west, if it is the earth that is moving?
5. What is the time occupied (a) by a complete rotation, and (b) a complete revolution?
6. Where is the speed of the rotation greatest? Where least?
7. What is a Leap Year? How is it caused?
8. How would you prove the Earth's revolution round the sun?
9. Explain the phenomena of the seasons.
10. Why is it summer in the northern hemisphere when it is winter in the southern?
11. What are the Equinoxes? When do they occur, and why?
12. Why are summer days long and winter days short?



13. On what dates do midsummer and midwinter fall in the northern hemisphere? And why?

14. What are the Solstices? When do they occur, and how Why are they so called?

15. Describe the various positions of the sun during the different seasons of the year and over the different parts of the earth.

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## CHAPTER V.

### THE EARTH'S SURFACE.

The Earth's surface consists partly of land and partly of water, the latter covering by far the greater area.

1. **Formation of the Earth's surface.**—Wise men tell us that ages ago the earth was a flaming body like the sun. In course of time the upper surface gradually cooled down and became firm enough for a man to live on. But the interior still retains its former intense heat. The earth's surface is now generally composed of rock, of which there are various kinds.

2. **Kinds of rock.**—Rocks are divided into two principal classes :

(1) **Stratified Rocks**, or those that are arranged in strata or layers. These are also called **Sedimentary** or **Aqueous**, according as they are believed to have been formed from rock deposits, or by the action of water. Such rocks compose the greater part of the Earth's surface and sometimes contain remains of plants and animals (called *fossils*), and hence are of great value in the study of the earliest history of the earth.

(2) **Unstratified Rocks**, or those that are found in loose disarranged masses. These are also called **Igneous**,



having been formed by the agency of fire at a time when the earth's surface was still very hot.

3. **Forces changing the Earth's surface.**—The Earth's surface is undergoing constant change through the effect of various forces, internal and external :—

(1) **Internal forces.**—The Internal forces are :—

- (a) *Sinking* or *rising* of portions of the earth's surface ;—*e. g.*, the shores of Sweden near Stockholm have risen lately, and several parts of the coast of England are sinking.
- (b) *Earthquakes*, which are probably due to (i) the breaking of rocks in the interior of the earth during the process of cooling ; (ii) explosions caused by sea water entering the heated interior of the earth ; (iii) falling in of hollows in the interior of the earth.
- (c) *Volcanoes*, or mountains giving out liquid fire from an opening near their top.

(2) **External forces.**—The external forces are :—

- (a) *Winds*, which break up rocks to pieces and thus help to form *soil* ;
- (b) *Rain*, which loosens the soil and washes away mud which deposits in the form of *silt* ;
- (c) *Rivers*, which cut their own channels and with the materials they carry down form fertile tracts called *alluvial plains*. They also sometimes form tracts of new land at their mouth by depositing silt, such a tract being called a *delta* ;

(d) *Frost*, which turns the water collected in hollows into ice ;

(e) *The sea*, which dashes against rocks and breaks them into pebbles or grinds them into sand.

4. **Definition of Land Terms**—(1) A **continent** is a vast *continuous* mass of land entirely surrounded by sea ; e. g., Asia, Europe.

A **Country** is a particular part of a continent ; e. g., India, France.

(2) An **Island** is a tract of land surrounded by water ; e. g., England, Ceylon.

A small island in the *sea* is called an **Islet**.

A small island in a *river* is called an **Eyot**.

Islands lying near each other are called a **Group** of Islands ; e. g., the Hebrides, west of Scotland. When the islands are very numerous, they are collectively called an **Archipelago** ; e. g., the East Indian Archipelago.

(3) A **Peninsula** is a mass of land *almost* surrounded by water ; e. g., India, Italy.

(4) An **Isthmus** is a narrow strip of land connecting two larger portions of land ; e. g., the Isthmus of Panama.

(5) A **Cape** is a point of land jutting into the sea ; e. g., Cape Comorin.

N. B.—A cape is also called a *head*, a *foreland*, a *naze*, a *point*, a *bill* and a *mull*. Lofty and precipitous capes are called *promontories*.

(6) A **Mountain** is a heaped-up mass of the earth's surface which rises above the neighbouring land to a great height.

When the land rises to a moderate height it is called a **Hill**.

When mountains extend for a considerable length in one direction, and have the same base, they form a **Chain** or **Range**; *e.g.*, the Himalayas, the Satpuras.

A **Volcano** is a mountain sending forth smoke, flame, ashes, &c., from its mouth, which is called the **Crater**; *e.g.*, Vesuvius, in Italy.

(7) A **Pass** or **Defile** is a gap between two mountains; *e.g.*, the Khyber Pass.

(8) A **Glacier** is a huge mass of ice formed on the side of a mountain or in a deep elevated valley; *e.g.*, the Ganges Glacier on the Himalayas.

(9) An **Avalanche** is a huge mass of snow running down the side of a mountain.

(10) A **Plateau** or **Tableland** is a large tract of level land much higher than the sea-level; *e.g.*, the tableland of the Deccan.

(11) A **Plain** is a level tract of land, without elevations or depressions; *e.g.*, the great Gangetic Plain, the Doab.

(12) A **Desert** is a large tract of rainless, treeless land, incapable of producing food for man and beast; *e.g.*, the desert of Sahara, in Africa. An **Oasis** is a green spot in the midst of a desert.

5. **Divisions of the Earth's surface.**—The Earth's surface is divided into six great continents—

Asia, Europe, Africa, North America, South America, and Australasia.

## QUESTIONS.

1. What is the scientific account of the formation of the earth's surface? Has the earth's surface always remained as it is at present?
2. What is the earth's surface generally composed of?
3. Name the various kinds of rocks and define each of them.
4. Classify and enumerate the various forces tending to change the earth's surface.
5. What do you understand by 'alluvial' plains? Are there any such plains in India?
6. Define—Archipelago, Isthmus, Promontory, Glacier, Avalanche, Oasis, Plateau, Volcano.
7. Give the names of the chief divisions of the Earth's surface. By what geographical term are these chief divisions called?

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CHAPTER VI.

## THE OCEAN.

Until very recently we knew nothing of the sea, its depth, its motions, the nature of its bottom, &c. The depth of the sea is now ascertained by means of an instrument called a *sounding-line*, and its bottom examined by means of what is called a *dredge*.

1. **Extent of the Sea Surface.**—The word *ocean* includes the entire body of water surrounding the globe. The water surface of the earth is nearly three times the land surface, and lies chiefly in the southern hemisphere. Taking the earth's total surface as measuring 197 million square miles, the water surface occupies a total area of 134 million square miles.

2. **Depth of the Sea.**—The depth of the sea varies in various places. The greatest depth that has been

measured is 31,000 feet. This is greater than the height of the loftiest mountain. The average depth is, however, only 12,000 feet, for the sea is much shallower in many places.

3. **The Sea Level.**—The whole of the water surface of the earth forms a true *natural level*, forming the limit according to which all elevations of land and depths of the sea are measured. The "sea level" forms the basis of calculation in all measurements of height and depth.

4. **The Saltness of the Sea.**—The water of the sea is always salt, so that it is impossible to drink it. The saltness is explained in various ways :

(1) Some say that there are vast beds of salt at the bottom of the sea ;

(2) others say that salt is carried to the sea by rivers, which acquire it in the course of their formation.

The saltness of the sea is, however, very useful. It preserves its water from corruption, and, by increasing its density, renders it suitable for supporting various forms of life, and for the floating of large ships upon its surface.

3. **Uses of the Sea.**—The sea is useful to man in various ways :—

(1) it contributes largely to health, by its softening influence upon climate ;

(3) it forms a barrier against foreign invasion ;

(3) it forms a medium of communication between different countries ;

(4) it forms the great source of rainfall, which is so indispensable to the support of animal and vegetable life.

6. **Divisions of the Sea.**—The sea is 'naturally one, but for purposes of reference it is divided into five large parts, called oceans, and named the Pacific, the Atlantic, the Indian, the Arctic, and the Antarctic, Oceans.

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### QUESTIONS.

1. How have we come to possess our knowledge of the sea and the condition of its bottom?
2. What is understood by the term *Ocean*? What is the extent of the Earth's water surface, and what is its proportion to the land surface? Can you give the approximate area of each in square miles?
3. What is the *greatest*, and what the *average*, depth of the sea? Why do these figures differ?
4. What do you understand by the term *Sea Level*?
5. What is a Sounding-line, and what is a Dredge?
6. Name the advantages which mankind derive from the sea.
7. How do you account for the saltness of the sea, and of what use is this saltness?
8. Name the five great divisions of the ocean.

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## CHAPTER VII.

### THE FIVE OCEANS.

1. **The Pacific Ocean.**—This ocean is called the Pacific (=peaceful), because it seldom witnesses storms. Its *area* is 68 millions of square miles, or one-third of the entire surface of the globe. It *extends* from the Arctic to the Antarctic circle, north and south, and from Asia and Australia to America, west and east. It is *divided* into the North and South Pacific Oceans by the equator. The greatest *depth* in the Pacific has been found to be 27,930 feet. The distinguishing features of the Pacific Ocean are :—



- (1) its bays or inlets are not very deep;
- (2) no large rivers, except those of China, fall into it;
- (3) it has a very large number of archipelagoes.

The chief inland seas connected with the Pacific are:—the China Sea, the Yellow Sea, the Sea of Japan, the Sea of Okhotsk, and Behring Sea,—on the east: and the Gulf of California on the west.

2. **The Atlantic Ocean.**—This ocean is named after Mount Atlas, in north-west Africa. In *extent* it is about 33 million square miles, and in average *depth* about 13,200 feet. It lies between America on the west, Europe and Africa on the east, and the Arctic and Antarctic circles on the north and south. It is divided into the North and South Atlantic by the equator. The distinguishing features of the Atlantic Ocean are:—

- (1) it is comparatively narrow;
- (2) it has few islands;
- (3) its coast-line is of enormous length.

The chief inland seas connected with the Atlantic are:—the Baltic, and the Mediterranean, on the east; and the Carribean Sea, the Gulf of Mexico, the Gulf of St. Lawrence and Hudson Bay, on the west.

3. **The Indian Ocean.**—This ocean is named after India whose shores it washes. Its *extent* is from 20 to 28 million square miles. It lies between Persia and India on the north, the Antarctic Circle on the south, Australia on the east, and Africa and the Atlantic Ocean on the west. The average *depth* is about 9,800 feet. The distinguishing feature of the Indian Ocean is that its waters are very hot and hence constitute the great source of rainfall for India.

The inland seas connected with the Indian Ocean are :—the Bay of Bengal, the Arabian Sea, the Persian Gulf, and the Red Sea.

4. **The Arctic Ocean.**—This ocean is named after the Arctic circle which forms its southern boundary. It lies between the Arctic Circle and the North Pole, and is about 4 million square miles in *extent*. It is connected with the Atlantic by a broad passage between Norway and Greenland, and with the Pacific by the Behring Strait.

The inland seas connected with the Arctic Ocean are :—the White Sea, the Kara Sea, and the Gulf of Obi.

5. **The Antarctic Ocean.**—This ocean is named after the Antarctic circle which forms its northern boundary. It is about 8 million square miles in *extent*.

This ocean has yet remained inaccessible owing to its huge and numerous icebergs and to the tempestuous and freezing winds which blow over it.

*Note*—The last two oceans are practically useless for navigation.

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### QUESTIONS.

1. Name the five great oceans of the Earth, giving the approximate extent of each.
2. Account for the names given to each of the five great oceans.
3. Name the chief inland seas connected with the Pacific Ocean.
4. Give the boundaries of the Indian Ocean, and name the inland seas connected with it.
5. Name the chief inland seas connected with the Arctic and Antarctic Oceans.
6. Why is the Antarctic Ocean so little known to modern geography?



7. Give the chief distinguishing features of the Pacific, the Atlantic, and the Indian Oceans.

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## CHAPTER VIII.

### MOTIONS OF THE SEA.

The sea has *three* distinct motions—(1) waves, (2) tides, and (3) currents.

#### I. — WAVES.

1. **How waves are caused.**—The waters of the sea are never perfectly still, so that the surface is at no time quite smooth, because the wind is constantly disturbing the level and gathering up the waters into waves. These waves appear to be moving towards the shore, but in reality they do not: they have only an up-and-down movement. When the wind is strong, the waves are very large and powerful.

2. **Breakers.**—Some waves dash against the coast with so much force that they break up rocks. Those waves that break against the coast in a mass of foam (or *Surf*) are called *Breakers*.

#### II.—THE TIDES.

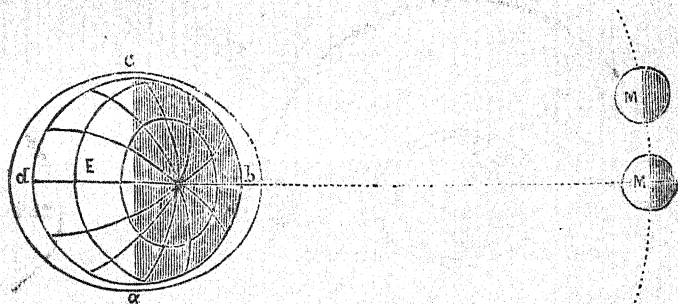
1. **Definition.**—The *Tides* are a regular rise and fall of sea water, which for six hours flow towards the shore, and for the next six hours gradually retreat from it. The rising of the water is called the **Flow**, and the retreating, the **Ebb**, of the tide. When the water has reached its highest point it is called **High Water**; when it is at its lowest it is called **Low Water**.

There is thus high water and low water twice in every twenty-four hours.

2. **How Tides are caused.**—Tides are caused by the attracting force which the moon exercises upon the earth. This force (which is called *gravitation*) acts most powerfully at that part of the earth which is turned towards the moon; and as water moves more easily than land, the result is that the waters of the sea are drawn together by the moon's attraction, and gathered up into a high wave, which sets towards the shore, and is called the *flow tide*. This water is drawn away from those parts of the earth which are not directly under the moon.

Fig. 4.

THE TIDES.



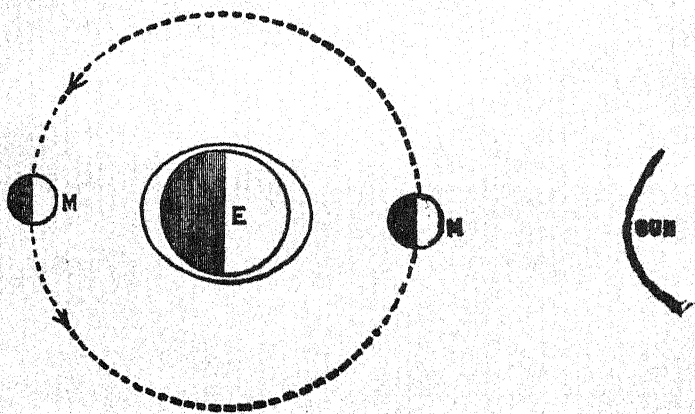
Now, on the opposite side of the Earth, the land intervenes between the moon and the sea, and is drawn away similarly by the attraction of the moon. The result again is that the waters flow together, causing another tide exactly opposite to the moon. There are, therefore, always two high tides at the same time, in different parts of the world. As the earth rotates on its axis, these high tides flow round it in large waves, and thus in

every part of the world there will be high and low tide twice in every 24 hours.

3. **Spring Tides and Neap Tides.**—The sun also attracts the waters of the sea, but not so powerfully as the moon, because it is more distant. When it is in a straight line with the moon, it adds its own power to the moon's, and the resulting tide is higher than usual. Such a tide is called a *Spring Tide*.

Fig 5.

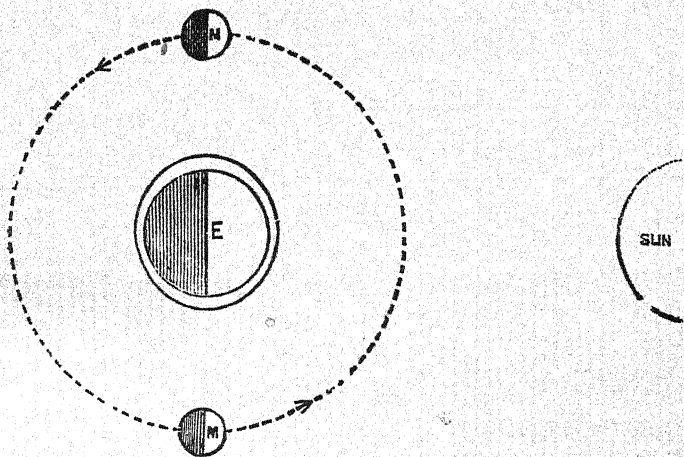
SPRING TIDES.



On the contrary, when the sun is not in a straight line with the moon, it partially counteracts the moon's attraction, and the resulting tide is lower than usual. Such a tide is called a *Neap Tide*.

Fig 6.

## NEAP TIDES.



Now, the moon revolves round the Earth once in 28 days, during which time it is twice in a straight line with the sun—once at full moon, (on *Purnamashi*) when it is exactly opposite to the sun, and again at new moon (or *Anavas*), when it is between the earth and the sun. We have therefore two spring tides in every month,—at full moon and at new moon. At half-moon, (about *Saptami*, both in the *Shukla paksha* and *Krishna paksha*), on the other hand, the forces of the moon and sun act against each other, and the resulting tides are not so high or low as usually. There are therefore two neap tides also in every month.

## SUMMARY.

Tides are caused by the attraction of the Moon and the Sun. There are two kinds of tides—Spring tides and Neap tides—the former being powerful, the latter, weak. The character of each tide depends on the position of the Sun, Moon, and Earth, in relation to one another, as represented in the following table :

No.	Position of the Sun, Moon, and Earth	Resulting Tide.
1	Full moon : Earth between moon and sun.	Spring Tide.
2	Half moon ; moon at right angles with the Earth and Sun (Shukla Paksha).	Neap Tide.
3	Half moon : Do. (Krishna Paksha)	Do.
4	New moon : moon between Earth and Sun.	Spring Tide.

## III.—CURRENTS.

1. **Definition.**—A *current* may be defined as a steady onward flow of sea water in a certain direction, through the other waters of the ocean. A current, caused by a strong steady wind and affecting only the surface, is called a *drift*.

2. **How currents are caused.**—Currents are chiefly caused by the evaporation of water in the hot equatorial regions, and as water finds its own level, the colder waters of the polar regions flow towards the equator to fill up the gap caused by the evaporation, thus producing a current.

3. **The Gulf Stream.**—The best example of a sea current is the *Gulf Stream*, which is a current of warm water issuing out of the Gulf of Mexico, and, crossing the Atlantic, washes the shores of western Europe. It greatly modifies the climate of eastern America and western Europe, (including the British Isles) which otherwise would be much colder than it now is.

4. **Definitions of Water Terms.**—(1) A sea is a branch of the ocean more or less enclosed by land ; *e.g.*, the Arabian Sea.

(2) A **Gulf** is a wide space of sea penetrating far into land ; *e.g.*, the Persian Gulf.

A **Bay** is a bend or hollow in the line of coast ; *e.g.*, the Bay of Bengal.

(3) A **Strait** is a narrow neck of water joining two seas ; *e.g.*, Palk's Strait.

A **Channel** is a long and wide strait ; *e.g.*, the English Channel.

(4) A **Lake** is a mass of water contained in some natural hollow of the earth ; *e.g.*, Sambhar Lake.

(5) A **River** is a large stream of fresh water running from the land towards a sea or lake ; *e.g.*, the Ganges.

A **Tributary** or **Affluent** is a small river flowing into a larger one ; *e.g.*, the Gumti which flows into the Ganges.

The *Source* of a river is the place from which it takes its rise. Its *channel* or *Bed* is the low hollow in which its waters flow.



Its *course* is the direction in which it flows.

A river's *banks* are called *right* or *left* according as they lie on the right hand or the left of a person who may be supposed to be rowing from the source towards the mouth of a river.

The *Basin* of a river is the tract of land on each side of it, which is drained by it and its tributaries, and from which it draws its supplies of water.

(6) The low flat land, formed of the mud and sand brought down by a river, where it divides into several branches near its mouth, is called a **Delta**.

This land is called a *delta* from its supposed resemblance to *delta*, the fourth letter of the Greek alphabet.

(7) A **Canal** is an artificial waterway joining two seas; e.g., the Suez Canal, joining the Mediterranean and the Red Sea.

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### QUESTIONS.

1. How are waves caused in the sea, and how do waves differ from breakers?
2. Explain the phenomena of the tides, and distinguish between *Spring Tides* and *Neap Tides*. Illustrate your remarks by means of diagrams.
3. Define the terms 'Ebb' and 'Flow' and 'High water' and 'Low water.' How often do we have them in a day?
4. How are there high and low tide twice in every 24 hours in every part of the world?
5. What kind of tide do we have (1) at full moon, (2) at new moon, (3) at half-moon in the *Shukla paksha*, (4) at half-moon in the *Krishna paksha*; (5) at quarter-moon?

6. Illustrate by means of a diagram the position of the sun, moon, and earth when there is a spring tide and a neap tide.
  7. How are currents in the sea caused ?
  8. What is the Gulf Stream and what is its effect on the climate of Europe ?
  9. Define the following terms, giving an example of each :—  
Gulf, Strait, Affluent, *Delta*, Canal.
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## CHAPTER IX.

## THE ATMOSPHERE.

1. **Definition.**—The atmosphere is that entire mass of air which surrounds the earth and moves with it.

2. **Existence of Air how proved.**—We do not see the air, but can infer its existence from the following circumstances :—

(1) by swinging our arms quickly backwards and forwards,

(2) by moving a fan in front of our face,

(3) by the movement of air which causes a wind,

(4) by the changes of heat and cold.

3. **The Nature of Air.**—(1) It is *fluid*, *i. e.*, it flows freely and easily from one place to another, so that if air is drawn up from one spot, more air will flow in to take its place.

(2) It is very *elastic*, *i. e.*, it is easily expanded by heat and contracted by cold. In an expanded form it is said to be *rarefied*; in its contracted form it is said to be *dense*.



4. **The component parts of Air.**—Air is made of the following elements :—

- (1) *Oxygen*, of which there are about 23 per cent.
- (2) *Nitrogen*, of which there are about 76 per cent.;
- (3) *Carbonic Acid Gas*, of which there is a small mixture ;
- (4) *Watery vapour*, which also exists in a small amount in all air.

Oxygen supports animal life. Nitrogen is destructive to animals, but supports plant life. Carbonic acid gas is the chief support of plants, but poisonous to animals in large quantity. Watery vapour is the source of clouds and rain and very necessary to both animal and plant life.

5. **Pressure of the Air.**—The air surrounds the earth up to a height of 45 miles, and in a rarefied form, exists up to about 200 miles above the earth's surface. This mass of air causes a pressure of about 15 lbs. on every square inch of surface. But on high ground this pressure is less, for the air becomes thinner and thinner as we go up.

6. **Construction and Use of a Barometer.**—There is an instrument called a **Barometer** to measure the pressure of the atmosphere. It is made of a glass tube about three feet long, filled with mercury and closed at one end. The open end is placed in a cup of mercury, so that no air can get into the tube, but so that the mercury is free to run out into the cup. It will be seen that the whole mercury does not run out into the cup, but some 30 inches of length will remain. This 30 inches represents the normal pressure of the atmosphere. If

the mercury falls below this, it is the sign of a coming storm, for it indicates a void in the atmosphere which must be filled by air rushing in from some other parts.

7. **Temperature of the Air.**—The air is capable of great varieties of heat and cold. It derives its heat partly from the sun's rays directly, but mostly from contact with the earth, which absorbs the sun's heat more rapidly and more largely than the air, to which it imparts its heat by a process called *radiation*. The air also radiates heat more slowly than the earth, so that it retains some part of the heat given off by the earth, and prevents it from getting too cold after the sun has set.

Dry air absorbs more heat than moist air; and hence in damp weather it is not so cold at night as in dry weather. Clouds also help to check radiation.

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### QUESTIONS.

1. What do you understand by the term *atmosphere*?
2. How may we prove the existence of air?
3. Name the component parts of air, and state the proportion in which each exists. Of what use are these component parts severally?
4. What is meant by air being *fluid* and *elastic*?
5. Explain what is meant by the *pressure* of the air.
6. Describe the construction and uses of a Barometer.
7. What does a fall of the barometer signify?
8. What is meant by the normal pressure of the atmosphere?
9. Define *radiation*, and explain why cloudy nights are not so cold as nights in dry weather.
10. How does the air become hot and cold?

## CHAPTER X. WINDS.

1. **Definition.**—Air in motion is called *wind*.

2. **How winds are caused.**—The earth's surface being curved, different parts of it are heated in different degrees by the sun's rays. The heated earth imparts its heat to the air and causes it to expand. In this expanded form it grows lighter and rises up higher, and the gap thus caused is filled by currents of air flowing in from the nearest regions. These currents of air are called winds.

3. **Kinds of Wind.**—Winds may be divided into two chief classes—(1) *Permanent winds*, or those that blow regularly and steadily in one direction all the year round, e. g., the Trade Winds, the Anti-Trade Winds, and the Polar Winds; (2) *Periodic winds*, which blow in one direction at one period of the year, and in another at another, e. g., Land and Sea Breezes, and the Monsoons. Besides these chief classes, there are (3) *Local winds*, such as the *Sirocco* of Sicily, the *Solano* of Spain, the *Khamsin* of Egypt, the *Sinoom* of Arabia, and the *Mistral* of Southern France. (4) A fourth class of winds are storms, cyclones, tornadoes, hurricanes, and typhoons.

3. **The Trade Winds.**—The Trade Winds\* are permanent winds which blow in the tropical regions north and south of the Equator. They are caused by the intense heat of the equatorial regions, which causes

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\* The Trade Winds are so called because they blow steadily in the same *track*—'trade' having once had the meaning of 'track' or 'course.' Some geographers derive the name from the fact that these winds are very favourable to trade or commerce.

the air just above them to rise upward and to be replaced by currents of air from places north and south of the equator. The rotation of the earth from west to east converts the northerly current into a north-easterly one, and the southerly current into a south-westerly one.

4. **The Anti-Trade Winds.**—These are winds blowing over the equatorial regions towards the Poles. But they cannot blow far in this direction, and being soon cooled, descend again to earth.

5. **The Polar Winds.**—These are intensely cold winds that blow regularly from the north-east in the Arctic regions, and from the south-west in the Antarctic.

6. **Land and Sea Breezes.**—These are periodic winds prevailing near the seashore. They are caused in the following way:—During the day the land gets more heated than the sea, and consequently the air over it rises, and a cool wind blows in from the sea to take its place, thus causing a Sea Breeze. At night this process is reversed: the sea is warmer, because it does not radiate its heat so quickly, and the air over it rises, and a cool wind blows from the land to take its place, thus causing a Land Breeze.

7. **The Monsoons.**—The Monsoons\* are periodic winds that blow over the Indian Ocean from April to October in a south-westerly direction, and from October to April in a north-easterly direction.

(a) **Cause of the Monsoons.**—During the summer months the air in Northern India gets heated and rises up into the atmosphere, and cooler currents from the

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\*The word 'Monsoon' is derived from the Arabic word *Mausim*, 'season'.

ocean flow towards India. As these winds blow over thousands of miles of sea, they are laden with moisture and produce rain.

(b) **The Two Monsoons : Summer and Winter.**—There are two Monsoons that blow in India : (1) the Summer Monsoon, blowing from April to October ; (2) the Winter Monsoon, blowing from October to April.

(1) **The Summer Monsoon** has two branches, one proceeding from the Arabian Sea, the other from the Bay of Bengal. The **Arabian Sea branch** first strikes the Western Ghats, and as these are much cooler than the sea, the moisture in the wind is rapidly condensed, and falls in torrents of rain. It then passes over these mountains, and gives some rain to the Deccan.

The **Bay of Bengal branch** first strikes the Burma mountains where, like the Western Ghats, and for the same cause, the rainfall is very heavy. Another part of the same branch strikes the Ganges delta, and the Garo, Khasia, and Jainti Hills, where the rainfall is heaviest of all—Cherapunji (a town on the Khasia Hills) averaging 500 inches in the year. Beyond this, the Monsoon is checked by the Himalayas. One current goes up the **Brahmaputra** valley, and the other is turned by the Himalayas and passes up the Ganges Valley.

(2) **The Winter Monsoon** commences in October. By the end of September, the Summer monsoon has raised the pressure of the atmosphere in Northern India and Burma, where the moist south-west wind can penetrate no longer, and blows therefore over the southern part of the peninsula from a north-easterly direction. This wind is therefore called the North-East monsoon.

8. **Storms.**—Storms are violent winds, generally accompanied by rain, and sometimes also by thunder and lightning. Storms may be local, or they may spread over large areas.

9. **Cyclones.**—These are winds that blow in a spiral direction around a calm centre. They are also called *Typhoons* or *Hurricanes*; and they are common in the Indian Ocean and the China Sea during the south-west monsoon.

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### QUESTIONS.

1. Define *wind*, and name the two chief kinds of wind.
2. How are winds caused?
3. What are Trade Winds, and why are they so called?
4. What are the Anti-trade winds, and the Polar Winds?
5. Give a full classification of the different kinds of winds.
6. What are the *Monsoons*, and how are they caused? How is the word *monsoons* derived?
7. Account for the Land and Sea Breezes.
8. Distinguish between storms and cyclones, and explain how they are caused.

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## CHAPTER XI, MOISTURE IN THE AIR.

1. **Evaporation and Condensation.**—All air contains some quantity of watery vapour, that is, moisture. This quantity varies with the temperature, warm air being capable of holding more moisture than cold air. Seas, rivers, lakes, and wet ground are constantly supplying



moisture to the air by a process called **Evaporation**, by which, through the sun's heat and the effect of wind, water is changed into vapour and held invisibly in the air. When the air has received as much vapour as it can hold, it is said to be *saturated*. If any more vapour enters it at this stage, or if the air is cooled to any extent, this extra amount of vapour becomes *condensed*. **Condensation** is therefore the process by which the vapour in the air becomes changed back into water.

2. **Different forms of Condensation.**—Condensation takes place in different forms,—dew, fog or mist, cloud, rain, and snow.

### I.—DEW.

1. **What is Dew.**—Dew is watery vapour deposited at night or in the morning upon the earth in the form of tiny particles of water resting on blades of grass, leaves of trees, &c.

2. **How is Dew caused.**—When the temperature of the ground has been reduced by radiation, so that the air in contact with it falls below its point of saturation, a portion of the vapour contained in the air becomes condensed and takes the form of *dew*.

3. **Dew-point** :—That point of temperature at which the air ceases to retain its moisture, and deposits it in the form of dew, is called *Dew-point*.

4. **Conditions necessary for the formation of Dew.** Dew can only form at night because it is at night that the temperature of the earth is reduced by radiation. But on cloudy nights there is little or no dew, because the clouds act as a screen and prevent radiation. For the same reason there is usually no dew under a tree or under the roof of a shed.



5. **Hoar-frost.**—Sometimes the weather is so cold that the temperature of the grass falls below the freezing-point of water, and then the dew takes the form of **hoar-frost** (or Hindustani, *pálá*), in which the condensed vapour appears in the form of little crystals of ice.

## II.—MIST, FOG, AND CLOUD.

1. **Difference between Mist, Fog, and Cloud.**—All these are caused by the condensation of watery vapour by a current of warm moist air, coming in contact with a bit of cold ground, or a current of cold air. If the reduction of temperature takes place at a height above the earth's surface, by means of a cold current of air coming into contact with a warmer one already on the point of saturation, the extra vapour will take the form of *clouds*. But if this takes place at a lower level, the condensed vapour is called *mist*. When the mist is very dense it is called *fog*.

2. **Where fogs are most common.**—Fogs are most frequent near rivers and marshes, because a great deal of evaporation is going on in these places. In cold countries a thick fog may hang over a place for a long time. When the air is full of dust or smoke, fog collects easily, because the minute particles of vapour cling to the particles of dust or smoke.

## III.—RAIN.

3. **How is Rain Caused.**—When evaporation and condensation have been going on for some time, the small particles of vapour in the air gather together and form large drops. These grow in size and number, until they are too heavy and too numerous to keep floating in the air, and then they fall to the ground in the form of *rain*.

2. **Distribution of Rainfall.**—Rain falls very unequally in different parts of the world. But as a rule rainfall is heavier in warm countries than in cold and temperate regions, because evaporation proceeds there more rapidly. For the same reason, rain is most frequent in places near the sea; and where there are mountains on the sea-coast, the rainfall is sure to be particularly heavy, because the moisture-bearing winds of the ocean are rapidly condensed by coming into contact with the cold mountain tops. Cherapunji, a town on the Khasia Hills in Assam, has the heaviest rainfall in the world. *The places where rainfall is scanty* are—(1) places surrounded by mountains, which obstruct the clouds; (2) places in the remote interior, which the clouds cannot reach without emptying themselves; (3) places so warm and dry that the clouds on reaching them are evaporated. Thus Egypt, the Sahara Desert, and parts of Arabia and Persia are rainless tracts.

3. **Rainfall how measured.**—Rainfall is measured in inches, and these inches represent the depth at which the rain water would stand if it did not flow away, or sink into the ground, or evaporate.

#### IV. SNOW AND ICE.

1. **What is snow.**—Rain water sometimes freezes before falling, and then it is called *Snow*. When the particles of moisture are exposed to an intensely cold current of air, they are frozen into small crystals, and when many of these collect together, they sometimes take beautiful shapes, before descending to the earth in the form of *Snow-flakes*.

2. **Difference between Snow and Ice.**—Frozen water also appears as *ice*. *The difference between snow and*

*ice is that the former is formed up in the sky, the latter is formed on the ground.* In cold countries the surface of rivers, lakes, and pools becomes a solid sheet of ice in winter. The top alone freezes first, because it is exposed to the cold air; below it the water remains in a liquid form. But if the temperature continues below freezing-point, ice will go on forming deeper.

3. **The Snow-line.**—On the top of high mountains the cold is so great\* that snow always falls instead of rain, and this snow never melts away completely, so that the mountain tops are perpetually clad in snow. The elevation above which a mountain is always covered with snow, is called the **Snow-line**. The height of the snow-line will of course be greater in hot countries than in cold; in the Himalayas it is between 16,000 and 19,000 feet.

4. **Avalanche.**—Snow sometimes collects so thick on the sides of a mountain, that a large mass of it runs down its slopes with a thundering noise. Such a mass of snow running down the slopes of a mountain, is called an *Avalanche*.

5. **Glacier.**—Sometimes the snow collected on the tops of mountains flows down into valleys, from which it runs in a stream to lower levels. Such a stream is called a *Glacier*, which may be defined as a river of frozen snow or ice moving down a valley to lower slopes, where it melts and forms a river. These glaciers have sometimes long lines of stone and mud, lying along the whole length of them; such lines are called **Morraines**. When the slope of a glacier is steep, the ice is often split into deep cracks, called **Crevasses**.

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\* The reason of this is that the temperature of the air falls about one degree Fahr. for every 300 feet of elevation.

6. **Iceberg.**—Large masses of snow sometimes separate themselves from glaciers and run down into the sea, and float on its surface. These are called *icebergs*, which sometimes rise several hundred feet above the surface of the sea. They are most common in the polar regions.

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### QUESTIONS.

1. Distinguish between *Evaporation* and *Condensation*.
2. Name the various forms in which the condensed moisture of the air appears.
3. How do you account for the deposit of dew on plants and trees at night?
4. What do you understand by *Dew-point*? By what other name is it known?
5. Why is it that on cloudy nights there is little or no dew?
6. What is *hoar-frost*, and how does it differ from dew?
7. How is fog or mist caused? Distinguish between fog and mist.
8. How are clouds formed? and how do clouds turn into rain?
9. What is meant by saying that the rainfall of a place is so many inches?
10. In what places is rainfall heavy, and in what places scanty?
11. What is snow, and what is the difference between snow and ice?
12. Define *Snow-line*. Is the height of the snow-line the same in all countries?
13. What is an *avalanche*?
14. Define a *glacier*, and state how it is formed.
15. What are *morraines* and *crevasses*?
16. What is an iceberg, and where are icebergs most common?

## CHAPTER XII.

## CLIMATE.

1. **Definition of 'Climate.'**—By the *climate* of a place is meant the prevailing character of its weathers, or all those changes of its atmosphere which sensibly affect plants and animals.

2. **Causes of variation in Climate.**—Different climates prevail over different parts of the earth's surface. The following circumstances cause differences in climate :—

(1) difference of latitude ;—the higher the latitude the cooler the climate ;

(2) difference of elevation ;—the higher a place the cooler it is ;

(3) slope or aspect at noon ;—if the slope is towards the sun at noon, the climate of a cold country is made warmer thereby ;

(4) proximity to large tracts of land or water ;—countries situated near the sea are less subject to extremes of heat and cold than others ;

(5) prevalence of particular winds ;

(6) presence of ocean-currents near the coast ;

(7) annual rainfall ;

(8) direction and relative position of mountain chains ;

(9) the nature of the soil—sandy soil being heated and cooled more quickly than marshy soil ;

(10) vegetation, which promotes moisture.

3. **Kinds of Climate.**—There are three main varieties of climate :—

(1) When the range of temperature prevailing at a place is great, the climate of that place is called *extreme*. As such climates are found in places far away from the sea-coast, they are also called *continental*.

(2) When the range of temperature prevailing at a place is small, the climate is called *marine* or *insular*. Such climates are usually found near the sea.

(3) Climates having a moderate range of temperature are called *equable*. Such climates are the most favourable to health.

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### QUESTIONS.

1. What is meant by the *climate* of a place?
2. Enumerate the circumstances that cause variation in climate.
3. What kind of climate have the following places :—places in high latitude, places on a high elevation above the sea level, and countries situated near the sea? Give reasons in each case.
4. Name the different kinds of climate, and state which of them is best favourable to health.

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## CHAPTER XIII.

### CIRCULATION OF WATER ON THE LAND.

The waters of seas, rivers and lakes are constantly being evaporated, and the vapour thus formed returns to the earth in the form of rain or snow. Some of this rain water runs into the nearest river or pool; some of it is again evaporated; and some sinks into the ground. This underground water reappears on the surface, or near it,



in various forms—as wells, as springs, as rivers, and as lakes.

1. **Wells.**—Rain water gradually sinks into the ground deeper and deeper till it collects at a depth of several hundred feet below the surface. This underground water is the chief source of supply for wells. In places (such as in Lower Bengal) where the rainfall is abundant, wells need not be deep, and water is found at a depth of some ten or fifteen feet only. But in places where the rainfall is scanty, (such as in the country west of the Indus) the wells may be 200 or 300 feet deep.

2. **Springs.**—The rain water that collects underground reappears on the surface in the form of springs, which are steady streams of water bubbling up through some damp spot in the ground, or flowing through some crack in the rocks.

(a) **Kinds of springs.**—Springs are of two kinds :

(1) *Surface springs*, (2) *Deep-seated springs*.

(b) **How are Springs formed.**—Surface springs are caused by the rain water finding its way through a thin layer of porous rock, and then arrested by a clay surface, the level of which is lower than that of the surrounding ground, into which the water then flows out as a spring. Deep-seated springs are caused by the rain water sinking into the ground through cracks and channels, for thousands of feet, and then arrested by impervious rock, where it collects on, till the accumulated water presses up to the surface as a spring.

(c) **How spring water differs from rain water.**—Rain water is *soft*, while spring water is *hard*, owing to the mixture of mineral substances, like iron and sulphur.



3. **Rivers.**—The junction of several little streams formed from springs, increased by rain water draining into them from the surface of the ground, forms a river.

The channel or hollow along which a river flows is called its **Bed**. The **Banks** of a river are the margins of land which border upon its channel.

The **Basin** or **Drainage** of a river is the whole area of land from which the water drains off into the river and its tributaries.

A **Watershed** or **Waterparting** is a ridge of land dividing one drainage area from another, *i. e.*, from whose sloping sides rivers flow forth in contrary directions.

A watershed is often a mountain chain, but in a flat country it may be only a slight undulation in the ground. In travelling from Lahore to Delhi the railway crosses the waterparting between the streams which flow to the Indus, and those which flow to the Ganges. But the country appears quite flat.

When the bed of a river suddenly slopes, so that the waters rush onward with increased force and speed and without obstruction, a **Rapid** is formed.

When a river rushes from a high to a much lower level, a **Waterfall** or **Cataract** is formed. When the quantity of water is small, and the descent also small, the fall is called a **Cascade**.

The mud and sand washed down by a river in its course is sometimes thrown up on its bank and forms fertile tracts called **Alluvial Plains**.

4. **Lakes.**—Lakes are often formed by the waters of a river flowing into a hollow surrounded by rising ground, where they collect till they again find an outlet. Lakes may be divided into four classes, according to the

manner in which they receive and discharge their waters :—

(1) *Lakes of reception*, which receive a river or rivers, but have no visible outlet ; *e.g.*, the Caspian Sea.

(2) *Lakes of emission*, which have an outlet but receive no rivers.

(3) *Lakes of transmission*, which both receive and emit rivers ; *e.g.*, the great American lakes.

(4) *Lakes which have neither inlets nor outlets*. These derive their waters from rain and from underground springs and discharge them by evaporation and similar underground channels ; *e.g.*, Lake Albano in Italy.

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### QUESTIONS.

1. In what various forms does underground water reappear on the surface ?
2. How are wells formed ? Whence do they draw their supplies of water ?
3. On what does the depth of a well depend ?
4. How are springs caused ? What two kinds of springs are there ?
5. How does spring water differ from rain water ?
6. How are rivers formed ?
7. What is understood by the *basin* of a river ? What is meant by a *waterparting* ?
8. Distinguish between a *cataract* and *cascade*.
9. What is an *alluvial* plain ?
10. How are *lakes* usually formed ?
11. Name and define the four classes of lakes, with examples.

## CHAPTER XIV.

## THE INTERIOR OF THE EARTH.

1. **Proofs to show that the interior of the Earth is hot.**—Geologists tell us that the earth was at first a mass of molten matter, as hot as the sun now is, and that in course of ages the surface has solidified, but that the interior is still as hot. This is proved by the three following circumstances :—

(1) The interior of deep mines is very hot, and the deeper the mine the greater the heat.

(2) There exist springs of boiling water, called *Geysers*, such as are found in Iceland, New Zealand, and North America. Similar hot springs are found at Sitakund in Monghyr, at Badrinath, and Jumnotri.

(3) The molten matter thrown out by volcanoes in an eruption is like liquid fire.

2. **Volcanoes.**—A *volcano* is an opening into the interior of the earth, through which steam, fire, molten rock, &c., are from time to time, thrown out high up into the air.

Volcanoes are often called "burning mountains", but they are not really, or at least were not originally, mountains at all, but merely masses of molten matter heaped up round the opening in a conical form, looking like a hill in general appearance.

The cup-like opening at the top of a volcano, through which the molten matter is emitted, is called the **Crater**.

The steam or other gas, fire, smoke, ashes, and molten rock thrown out by a volcano, are called **Lava**.

The action of a volcano throwing out molten matter is called an **Eruption**.

3. **Kinds of Volcanoes.**—Volcanoes may be *active*, *dormant*, or *extinct*.

An **active volcano** is one that is still in a state of eruption. A **dormant volcano** is one that is not in eruption now, but may be so any moment. An **extinct volcano** is one that has never been known to be in eruption within the memory of man. Such a volcano must have once been active, and may now only be in a dormant state. For example, Mount Vesuvius in Italy had never been known to be in eruption, when all of a sudden in the year 79 A. D. it broke out in a terrible eruption and buried under its ashes two of the flourishing towns of ancient Italy—Pompeii and Herculaneum.

4. **Earthquakes.**—Earthquakes are movements of the earth's crust, caused probably by the breaking of the strata through the force of the contraction caused by the cooling of the earth's crust, or by the actual sinking of portions of the crust. They are closely connected with volcanoes, as is shown by the fact that earthquake shocks frequently accompany volcanic eruptions, and that the most destructive earthquakes have occurred in volcanic districts.

### QUESTIONS.

1. What do Geologists tell us of the original state of the earth? What proofs can you adduce in support of the above theory?
2. What is a volcano? How is it formed?
3. Would you class volcanoes as mountains? Give reasons for your answer.

4. Explain the terms—*Crater, Lava, Eruption.*
5. Classify volcanoes. Are there really any extinct volcanoes ?
6. What are earthquakes ? What reasons can you give to show that earthquakes and volcanoes are allied phenomena ?

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## CHAPTER XV.

### LATITUDE AND LONGITUDE.

Geography treats of the earth as a globe, with certain imaginary points and lines marked upon its surface. These imaginary points and lines are necessary not only for the purpose of fixing accurately the position of places on the earth's surface, but also for the purpose of describing correctly the effects of the earth's annual and diurnal motions.

#### I.—The Geographical Points.

The chief of these geographical points are the Poles, and the Four Cardinal points.

1. **The Poles.**—The *Poles* are the extremities of the Earth's axis, the imaginary line about which the earth rotates. One of these being always turned towards the north part of the celestial sphere, is called the *North Pole* ; the other, being always turned towards the south part of the heavens, is called the *South Pole*.

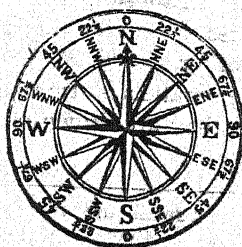
2. **The Four Cardinal Points.**—These are the four chief points in the horizon : they are called *East, West, North* and *South*. If we stand facing the rising sun, our face will be towards the east, our back towards the west, our right hand towards the south, and our left hand towards the north. These four cardinal points are

generally represented by the letters E. W. N. and S. Intermediate directions are denoted by compound names, such as North-East, which means midway between north and east, and this is denoted by the letters N.-E. Similarly S.-E. stands for south-east, S.-W. for south-west, and so on.

3. **The Mariner's Compass.**—To determine the cardinal point we have to use an instrument called the *Mariner's Compass*. It is a brass box with a glass lid, and on the bottom of it is a round piece of cardboard marked with the four cardinal points and the intermediate ones. In the centre is a pin, on which is mounted a *magnetic needle*, which naturally always points north, being the direction of the *Pole Star*, which always appears in the north.

Fig. 7.

THE MARINER'S COMPASS.



## II.—The Geographical Lines.

The chief of these imaginary lines are the Equator, the Meridians, and the Parallels of Latitude.

1. **The Equator.**—The *Equator* is an imaginary line drawn round the earth exactly midway between the



Poles. The earth is thus divided into two equal parts, the Northern Hemisphere and the Southern Hemisphere. The *latitude* of places is measured *from* the Equator, north and south; and their *longitude* is measured *on* it, east and west\*.

2. **The Meridians.**—The *Meridians*, or lines of longitude, are great circles passing through the Poles, and cutting the Equator at right angles. Each of them divides the earth into two halves, the Eastern and Western Hemispheres. Any point of the earth's surface may have its own meridian. The number of *possible* meridians is thus unlimited, but in practice there are only 24 such meridians usually described upon globes, and they are placed at intervals of  $15^{\circ}$  apart.

3. **The Parallels of Latitude.**—These are small circles drawn parallel to the equator. All those places which are due east and west of one another are on the same parallel. But all those places which are situated at different distances from the equator, or north and south of one another, have different parallels. The number of possible parallels is therefore unlimited. But as a matter of fact they are drawn on maps and globes at intervals of  $10^{\circ}$  apart.

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\* All circles, great and small, are regarded as made up of 360 degrees. Every degree is divided into 60 minutes, and every minute into 60 seconds. *Degrees* are indicated by a small zero ( $^{\circ}$ ); *minutes* by a single dash ( $'$ ) and *seconds* by a double dash ( $''$ ). The half of a circle, or a semi-circle, is  $180^{\circ}$ . The fourth part of a circle, called a *quadrant*, is  $90^{\circ}$ . Since every circle, however great it may be, is supposed to be divided into  $360^{\circ}$ , it follows that the *length* of a degree varies in proportion to the size of the circle. The equatorial circumference of the earth is 25,000 miles; hence the length of a degree at the equator is about 69 miles.



4. **The Four Constant Parallels of Latitude.**—Four of these parallels occupy definite positions on the globe, and are known by special names. These are:—

(1) The *Tropic of Cancer*, which lies  $23\frac{1}{2}^{\circ}$  north of the equator ;

(2) the *Tropic of Capricorn*, which lies  $23\frac{1}{2}^{\circ}$  south of the equator ;

(3) the *Arctic Circle*, which lies  $23\frac{1}{2}^{\circ}$  from the North Pole ;

(4) the *Antarctic Circle*, which lies  $23\frac{1}{2}^{\circ}$  from the South Pole.

These four constant parallels determine the division of the earth's surface into five great climatic zones.

5. **How to determine the Position of a Place.**—In order to give the position of a place we must state its latitude and longitude. *Latitude*, as we have seen, is distance in degrees, measured east and west *along* the equator, from the *Prime Meridian*, or that from which we agree to count. The prime meridian used by England is the meridian of Greenwich, a town about four miles E. S. E. of London, where there is a famous observatory.

*Latitude* runs from  $0^{\circ}$  at the equator to  $90^{\circ}$  at the poles. Hence the nearer the poles the higher the latitude. *Longitude* runs from  $90^{\circ}$  at Greenwich (or the prime meridian) to  $180^{\circ}$ , where the meridian circle again cuts the equator on the other side of the world, that is, exactly half-way round the globe from the first meridian.  $180^{\circ}$  west is the same meridian as  $180^{\circ}$  east.

For example, in order to give the exact position of Calcutta we must say that it is in Lat.  $22^{\circ}$  N., and Long.

88°E. This means that it is situated on the spot where the 22nd parallel of north latitude cuts the 88th meridian of east longitude.

### QUESTIONS.

1. Why do geographers treat the earth as a globe marked with certain imaginary points and lines?
2. Name the Geographical points and lines which are marked upon maps and globes?
3. What are the two Poles?
4. Name the four cardinal points, and enumerate the three chief ways of determining directions in space?
5. Describe the construction and uses of a compass.
6. Define *Equator*, *Meridian*, and *Parallels of Latitude*.
7. What is a *degree*? What is the length of a degree at the equator? And how do you find it?
8. What and where are the Tropics of Cancer and Capricorn, and the Arctic and Antarctic circles?
9. State the method of determining exactly the position of a place on the map.

## CHAPTER XVI.

### MAPS AND MAP-DRAWING.

Geography is of no use without a map on which one can see the positions of the places described. A *map* is a representation of the earth, or some portion of it, on a flat surface. But to get a flat representation of any large portion of a curved surface is impossible, as one can easily see by trying to fit a sheet of paper to the surface of a globe. A flat map can therefore never be a perfectly accurate one.

#### Practical Hints on Map-Drawing.

1. **Meridians and Parallels.**—The first foundation of a map must be the meridians and the parallels, as

without these it is impossible to fix the position of places. The meridians are drawn at intervals of  $15^{\circ}$  apart, commencing from the prime meridian running through Greenwich. They run *along* the equator up to  $180^{\circ}$  east and west. The parallels run north and south *from* the equator at intervals of  $10^{\circ}$  apart and upto  $90^{\circ}$  at the Poles.

2. **The Scale.**—To have a true sense of distance, we must adopt a scale, representing a fixed number of miles to every inch of the map's surface. A map on a large scale may, for instance, allow an inch to every 5 or 10 miles, whilst one on a small scale may allow an inch to 100 or 200 miles. Thus maps of a whole continent or a single country may be of the same size, if drawn to different scales.

3. **The Cardinal Points.**—In a map it is generally agreed to fix the north at the top, the south at the bottom, the east at the right hand, and the west at the left.

4. **The Coast-Line.**—Make a *faint* pencil-mark wherever the coast-line touches or cuts the lines of latitude and longitude. Then complete the coast-line with the help of these dots, taking care (1) that you get a natural appearance, (2) that you correctly obtain the shapes and positions of important openings and capes, and (3) that you do not draw the coast-line bit by bit. On completing the coast-line, insert the important islands lying off the coast in their correct positions, having regard to their comparative size, and distance from the coast.

5. **Mountains.**—Mountain ranges should be sketched in faint pencil by means of wavy lines, or in the shape of herring-bones, as is done in most maps. Take care that you correctly show their general direction and position. Mountain peaks should be shown by a small circle.

6. **Rivers.**—Rivers are indicated by means of lines, and traced from their source in a hill or lake to their mouth near the sea shore, the lines representing them becoming thicker and thicker towards the mouth. Take care (1) that wherever a river breaks through a mountain range, a gap is left in the mountains for that purpose ; (2) that you avoid an unnatural appearance by drawing your lines straight, for a river never flows in a straight line for any length of its course ; (3) that the junction of tributaries with rivers is indicated without causing unnatural angles.

7. **Towns.**—Towns and cities are indicated on a map by means of dots, large or small, according to the actual size of the places represented. The capital of a country must be represented by means of a *square* dot.

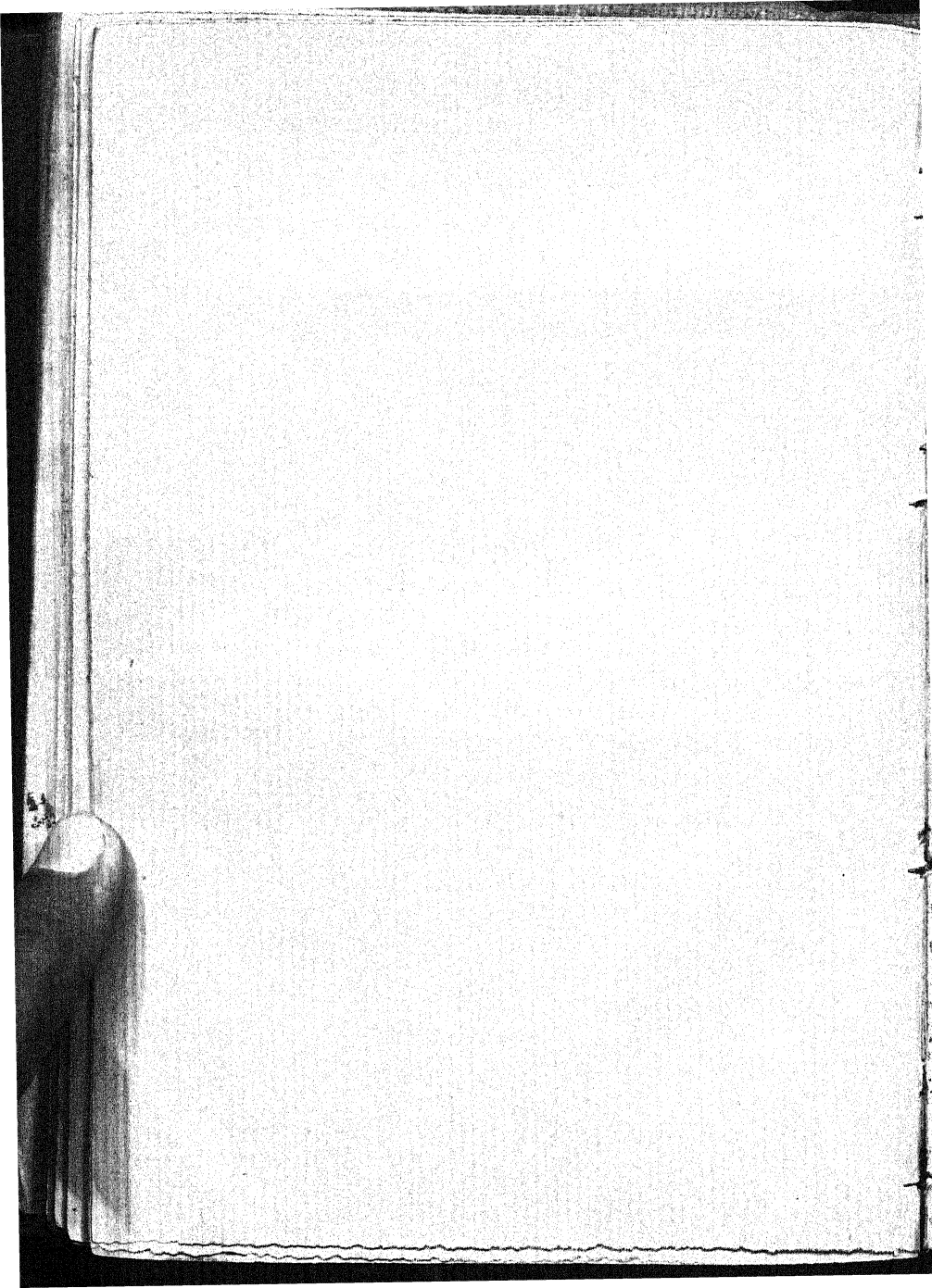
8. **The Lettering.**—Lettering a map is as important as it is difficult. The size of the letters used should be uniform throughout. Capital letters should only be slightly larger than small ones. The surrounding countries, and seas and oceans are named with letters rather larger than those used for the other places. In maps of continents, or of a number of countries taken together, the name of each country should be inserted carefully. Each name should stand out boldly on its own country, and should stretch appropriately across the country. Take care that all letters belonging to one name are the same distance apart.

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### QUESTIONS.

1. What is a *map* ?
2. Why can a flat map never be an accurate one ?
3. What is the *Scale* of a map ?
4. How are mountains and rivers represented on a map ?
5. What cautions should be observed in drawing the coast-line

BOOK I.  
**INDIA.**





# INDIA.

## CHAPTER I.

### BOUNDARIES, SIZE, AND SHAPE.

#### 1. Boundaries.

On the North : the Himalaya Mountains.

On the East : Burma and the Bay of Bengal.

On the South : the Indian Ocean.

On the West : Afghanistan, Beluchistan, and the Arabian Sea.

#### 2. Size.

The greatest *length* of India from the north of Kashmir to Cape Comorin is just above 2,000 miles ; the greatest *breadth*, from the east end of Burma to the west end of Beluchistan, is 2,500 miles. The total *area* of the country is 1,800,000 square miles.

#### 3. Shape.

India is in shape like a rough triangle turned upside down. The Himalayas in the north constitute the base, and Cape Comorin, the southernmost point, constitutes the apex of the triangle.

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### QUESTIONS.

1. Draw a rough outline of the map of India, and state the shape of it.
2. What is the greatest length and the greatest breadth of the country ?
3. What is the total area of the Indian Empire ?
4. State the boundaries of India.



## CHAPTER II.

## NATURAL DIVISIONS OF INDIA.

India is naturally divided into four parts—(1) the region of mountains ; (2) the region of plains ; (3) the region of tablelands, (4) the coast-strip.

## 1.—The Region of Mountains.

The great region of mountains is in the north of India. The principal features of this region are :—

1. **The Himalaya Mountains.**—This immense range of mountains, the highest in the world, runs nearly east and west for about 1,500 miles. **Mount Everest**, or **Gauri Shankar**, the highest mountain in the world, is in the Nepal Himalaya, and is 29,002 feet high. Besides this peak, the Himalayas have several others more than 25,000 feet in height, such as—**Kinchinjanga**, **Dhawalgiri**, **Nanda Devi**, and **Nanga Parbat**.

2. **Other mountain ranges.**—(1) the **Hindu Kush**, which are a continuation of the Himalayas, on the west beyond the Indus ;

(2) the **Safed Koh**, south of the Kabul River, running parallel to the Hindu Kush ;

(3) the **Suleman mountains**, stretching southwards beyond the Safed Koh. Its highest peak is named the **Takht-i-Suleman**.

(4) the **Kirthar** and **Hala** ranges, separating Lower Sind from Beluchistan.

*N.B.*—The above ranges constitute the *western* offshoots of the Himalayas.

(5) the **Patkoi**, the **Naga**, and the **Khasia Hills**, in Assam ;

(6) the **Tipperah and Chittagong Hills**, and the **Arakan Yoma**, between India and Burma.

*N. B.*—The above ranges constitute the *eastern* offshoots of the Himalayas.

3. **Smaller Hills.**—Besides the huge mountains, there are here and there smaller hills having long narrow valleys behind them. The best known of these are—(1) the **Siwalik Range**, between the Ganges and Jumna, which surrounds the valley of Dehra Dun; and (2) the **Salt Range**, running south-west from Jhelum to Kalabagh on the Indus.

4. **The Bhabar and the Tarai.**—The large rivers of India, such as the Ganges, the Brahmaputra, and the Indus, and their chief tributaries, all take their rise from the Himalayas. At the foot of these mountains, everywhere to the east of the Ganges, is a slope of stone and gravel, with a thin layer of earth, in which most of the streams disappear. This tract is called the **Bhabar**. The level plain further down, where the streams reappear, is a wet, marshy tract of country, called the **Tarai**.

5. **The Mountain Passes.**—The most important of these are—(1) the **Bolan Pass** in the south, leading to Kandhar, and (2) the **Khaibar Pass**, in the north, leading to Kabul.

6. **Products.**—The chief products of the mountain region are—(1) *salt*, obtained chiefly from the Salt Range of the Punjab\*; (2) *coal*, found in the hills of Upper Assam; (3) *petroleum*, also found in Upper Assam; (4) *iron ore*, found almost everywhere; (5) *gold, copper, and other metals*, found here and there in small quantities.

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\* Hence this salt is popularly known as *Lahouri* salt.

## II.—The Region of Plains.

The region of plains is bounded on the north by the Himalayas, on the *east* by the eastern end of Bengal, on the *south* by the Deccan, and on the *west* by Sind. The chief characteristics of this region are :—

(1) It is very *flat* everywhere, except (*a*) at the waterparting between the Jumna and the Sutlej in Sirhind\*; and (*b*) at the waterparting between the Jumna and the Ganges in the Doab†. It is nowhere above 1,000 feet in elevation.

(2) It is well *washed by rivers*.—The most important rivers of this region are the Ganges, and her chief tributaries—the Jumna, the Ramganga, the Gumti, the Ghagra, the great and little Gandak, the Gogri, the Kusi, and the Mahanadi. To these may be added the Brahmaputra, and the Megna, of Assam, and the chief rivers of the Punjab—the Sutlej, the Bias, the Ravi, the Chenab, and the Jhelum, which unite to form the *Panjanad*, which falls into the Indus.

(3) It is very *fertile*. Many parts of it bear three or more crops in the year. But many are mere sandy plains, such as parts of the Panjab, Sind, and Rajputana.

(4) It is very *extensive*, comprising more than one-third of the land of India proper.

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## III.—The Region of Tablelands.

This region comprises—

(1) the **tableland of the Deccan**, bounded on the

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\* Literally means 'the top of India.'

† Literally means 'the country enclosed by two rivers.'

west by the Western Ghats, on the east by the Eastern Ghats, and on the north by the Vindhya and Satpura Hills;

(2) the **tableland of Central India**, lying to the north of the Deccan, and bounded on the west by the Aravalli Hills, on the south by the Vindhyas, and on the north sloping down to the Ganges and Jumna valley.

The *chief rivers of this region* are :—

(1) the **Godaveri**, which rises near **Nassik**, and branches off into a delta near **Rajmahendri**. It receives many tributaries, and drains a large extent of country in the Nizam's Dominions and the Central Provinces.

(2) the **Krishna**, which rises near **Mahabaleshwar** in the Western Ghats, and branches off into a delta at **Bezawada**, falling into the sea near **Masulipatam**.

(3) the **Mahanadi**, which rises in the **Nawagarh hills**, and divides into branches which traverse the plain of **Orissa**. It drains a great extent of country in the Central Provinces and **Orissa**.

(4) the **Kaveri**, which drains **Mysore** and **Coorg**, and has a large and fertile delta called the province of **Tanjore**.

(5) the **Tapti**, which drains **Berar** and **Khandesh**, and falls into the **Arabian Sea**.

(6) the **Narbada**, which rises in the **Amarkantak Hills**, east of **Jubbulpore**, and flows into the **Arabian Sea**, having a course nearly paralld to that of the **Tapti**.

The *peculiar characteristics of the rivers of Southern India* are :—

(a) their valleys are narrow and deep ;

- (b) they flow through a dry country, and hence are comparatively shallow ;
- (c) they are of small use for navigation ;
- (d) their deltas are remarkable for their fertility ;
- (e) some of them are often in flood.

#### IV.—The Coast-strip.

This region comprises—

(1) The western coast, a strip of about 40 miles' breadth, stretching from the head of the Gulf of Cambay to Cape Comorin, and lying between the Western Ghats and the seashore. The northern half of it is called **Konkan**, and the southern, **Malabar Coast**.

(2) The eastern coast, a similar strip lying between the Eastern Ghats and the Bay of Bengal, and called the **Caromandal Coast**.

The chief point of *difference between the two coasts* is that the Malabar coast has many harbours or inlets with deep water, into which ships can enter, such as Bombay, Goa, &c. ; while on the Caromandal coast there are no natural harbours, except a little one at Vizagapatam.

#### QUESTIONS.

1. Into what four regions is India naturally divided ? Give a brief account of the principal physical features of each.
2. What and where is the highest mountain in the world ?
3. Name the western and the eastern offshoots of the Himalayas.
4. What is the *Bhabar* ? What is the *Tarai* ?
5. Name the chief mountain passes through the Himalayas.
6. Name the principal products of the mountain region in the north of India.

7. Give the boundaries of the great northern plain of India.
8. Mention the chief characteristics of the Plain Region of India.
9. Name the chief rivers of Southern India, and mention their peculiar features.
10. What tract of country is called the coast-strip of India?
11. State the chief points of difference between the Malabar and the Caromandal coasts,

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### CHAPTER III.

#### THE CLIMATE AND SEASONS OF INDIA.

##### I.—Climate.

Few countries in the world present such varieties of climate as India. Generally speaking, India is a very warm country, but it is cold in the mountainous regions. The higher the elevation the cooler it is, and the tops of the highest mountains are so cold that they are covered with perpetual snow.

##### II.—Seasons.

The year is roughly divided into three seasons ;—(1) *the cold season*, which lasts from November to February, and is usually dry ; (2) *the hot season*, which lasts from March to June, and is accompanied by a strong hot wind called the *loo* ; (3) *the rainy season*, which lasts from July to October, during which time rain continues to fall frequently.

##### III.—Rainfall.

The rainfall in India depends upon the Monsoons\*, and is very unequally distributed over the country. While

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\* See pp. 37-38.



Sind and Rajputana get nothing or very little of it, Chirapungi, in the Khasia Hills, has the heaviest rainfall in the world, averaging more than 500 inches in the year.

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### QUESTIONS.

1. What is the general character of the climate of India?
2. Into how many seasons is the Indian year divided? Name them and state how long each lasts.
3. On what does the rainfall in India depend? And why?
4. Why is the rainfall in India so unequally distributed?

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## CHAPTER IV.

### THE CHIEF PRODUCTS OF INDIA.

#### I.—Minerals.

India is very rich in minerals. The chief mineral products are—

- (1) *Coal*—found in Bengal, Assam, and Hyderabad.
- (2) *Iron*—found in Madras, the Central Provinces, and Bengal.
- (3) *Gold*—found chiefly in Kolar, in Mysore.
- (4) *Mineral oil*—found chiefly in Burma.
- (5) *Salt*—obtained from Madras, the Sambhar Lake in Rajputana, and the Salt Range of the Punjab.

India also produces small quantities of copper, lead, antimony, diamond and sapphire.

#### II.—Vegetable Products.

As regards vegetable products, India can raise almost every crop known to agriculture. Two harvests are reaped in the year—(1) the *Rabi*, or the winter crops; and (2)



the *Kharif*, or the rainy season crops. The former include *wheat*, *barley*, and *pulses*; the latter, *maize*, *jowar*, *bajra*, and other *millets*, and also *rice*.

Besides the above food-grains, several kinds of *oil-seeds* are also grown, such as *til*, *mustard*, *linseed*, and the *castor-oil plant*.

Fibrous plants for making cloth, ropes, and paper are also largely grown, such as *cotton*, *jute*, and *hemp* or *flax*.

### III.—Drugs.

The drugs include (1) *indigo*; (2) *quinine*, obtained from a plant grown in Sikkim, the Nilgiris, and Ceylon; (3) *opium*, from the poppy which is grown in Behar, the United Provinces, and Central India; (4) *tea*, grown in Assam, the Kangra Valley, and Kumaon; and (5) *coffee*, grown on the hills of Southern India.

### IV.—Fruits.

The chief fruits of India are—(1) the *mango*, which is found almost everywhere; (2) the *plantain*, which is equally common; (3) *oranges* and *lemons* of all kinds; (4) *peaches* and *pears* found on the hills and the northern plains; (5) *apples*, grown in Kashmir and Kumaon; and (6) the *date*, grown in Sind.

### V.—Timber Trees.

(1) The chief forest trees are—*oaks* and *pin*es of different kinds.

(2) The ordinary *timber* trees are—*Sal*, *Tun*, *Shis-ham*, *Pipal*, *Siras*, *Babul*, *Mango*, *bamboo*, &c.

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## QUESTIONS.

1. Name the chief mineral products of India.
2. Name the chief forest trees and the timber trees of India.
3. Name the chief fruits of India, and the places where they are chiefly found.
4. Name the chief crops of India.
5. How many harvests are reaped in the year? By what names are they known in the country?

## CHAPTER V.

## THE ANIMALS OF INDIA.

## I. Animals.

**Wild animals** are numerous. The *elephant*, *tiger*, *wild ox*, *buffalo*, *leopard*, *bear*, *wild boar*, *hyena*, *jackal*, *wild cat*, *monkey*, and many kinds of *deer* are found in the jungles of the plains and lower hills. The elephant, buffalo, and some other large wild animals are not found in the Punjab. The *rhinoceros* is found in Bengal, Assam, and Burma; the *lion* in Gujarat, and the *wild ass* in Sind.

**The Domestic animals** include the *ox*, *sheep*, *goat*, *horse*, *ass*, *dog*, *cat*, *camel*, and *elephant*—among quadrupeds; and the common *fowl*, *pigeon*, *duck*, and *goose*—among birds. To these may be added the *silk-worm*, which is reared both in the Punjab and in Bengal.

## 2. Birds.

The birds of India are distinguished by their gay plumage, but singing birds are rare. The green *parrot* and the grey-necked *crow* are most common. The *crane*, and *peacock*, the numerous *pheasants* of the Himalayas, and many kinds of *partridges* and *quails* are among others of

the birds of India. The *floriken* is a common game-bird. The *maina* is found everywhere, and a hill variety makes an excellent talker.

### 3. Reptiles.

Among reptiles there are two kinds of *crocodiles*, hundreds of kinds of *snakes*, some harmless and some poisonous, and *lizards*. In the rainy season the ground swarms with *frogs*, and the air is filled with winged *insects* of different kinds.

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### QUESTIONS.

1. Name the wild animals of India, and mention where they are found.
2. Name the chief domestic animals of India.
3. Name the birds that are most common in India.
4. Name the principal kinds of reptiles found in India.

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## CHAPTER VI.

### THE PEOPLE OF INDIA.

#### I.—The Chief Races.

India is inhabited by many different peoples, but they are all of a more or less mixed descent. (1) The aboriginal inhabitants were a dark race of men, of middle stature, lean, with flat noses, and fine long hair on head, face, and chest. Descendants of these people still form the bulk of the population of Southern India, and are called the **Dravidians**. Wild tribes of this race are found elsewhere, such as the **Santhals** of Bengal, the **Juangs** of Orissa, the **Gonds** of the Central Provinces, the **Todas** and the **Bhils**.

(2) Another race found in India is the **Mongolian**. These are yellowish in complexion, short in stature, with

broad faces, long stiff hair and no beard. They are found chiefly in Tibet and Burma.

(3) The chief race of men in India are however the **Aryans**, a cultured race, who in the earliest ages descended into India from their home in Central Asia, and conquered and civilized the people of Northern India with whom they lived and mixed. The high caste Hindus of the present day, and some of the lower castes also, especially in the Panjab, Kashmir, and Sind, are descended from these Aryans.

(4) A yet another race of people are found in Ceylon and the Laccadive and Maldiv Islands. Some of these are of Arab descent, the Arabs having had communication with Ceylon in very early times. Some of these are Malays, who are a branch of the Mongolian race, to which the Chinese and Japanese belong.

## II.—The Chief Religions.

In India we find people belonging to every kind of religion professed by man. The rude savage tribes worship stocks and stones; the educated classes profess the most advanced faiths attained by man. The population of India, distributed according to religion, is as follows :—

1. Hindus	...	...	217½ millions.
2. Mohamedans	...	...	66½ "
3. Buddhists	...	...	10¾ "
4. Christians	...	...	3¾ "
5. Sikhs	...	...	3 "
6. Jains	...	...	1½ "
7. Zorastrians ( <i>i.e.</i> , the Parsis, or fire-worshippers)	...	...	100,000
8. Jews	...	...	20,000

The total population of India according to the Census of 1911, is 315 millions.

### III—The Chief Languages.

There are in all about 150 different languages spoken in India. These may be divided into three great families:—

(1) the *Dravidian languages*, the most important of which are Tamil, Telugu, Malayanam, Kanarese, and Tulu,—spoken in the south;

(2) the *Aryan languages*, the chief of which are Hindi, Bengali, Behari, Uriya, Rajasthani, Gujrati, and Panjabi,—spoken in the north and centre;

(3) the *Indo-Chinese languages*, of which Burmese is the most important.

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### QUESTIONS.

1. Name the chief races of men inhabiting India.
  2. Who were the Aryans, and what people in India belong to this race?
  3. To what race do the inhabitants of Ceylon and the other islands round the coast of India, belong?
  4. Name the chief religions found in India, and state in what proportion of the population each is found.
  5. Name the chief languages spoken in India, and state in what parts they are spoken.
  6. Name the savage tribes found in different parts of India.
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## CHAPTER VII.

## GOVERNMENT AND POLITICAL DIVISIONS OF INDIA.

## I.—Government.

*(a) British India.*

The Government of India is carried on by the Secretary of State for India and his Council in England, and the Viceroy and his Council in India. Laws affecting the whole of India are made by the Viceroy's Legislative Council.

For purposes of good administration, British India is divided into presidencies or provinces under local governors. Bengal, Madras and Bombay are each ruled by a Governor and Council appointed by the King-Emperor. The United Provinces, Behar and Orissa, the Panjab, and Burma, are under Lieutenant-Governors. The Central Provinces, Assam, Coorg, Ajmere, British Beluchistan, the North-West Frontier Province, and the Andamans are under Chief Commissioners.

The provinces are divided into smaller parts called *Divisions*, administered by **Commissioners**. Each division has further smaller parts, called *Districts*, administered by **Collectors** or **Deputy Commissioners**. Each district is again sub-divided into *tahsils*, in charge of **Deputy Collectors** or **Tahsildars**.

*(b) Native States.*

The **Native States** are those parts of India which are ruled by their own rajas, and not by British officers. They comprise two-fifths of the total area of India. Some of these are large kingdoms with large populations, and maintaining their own troops; others are only



petty chiefships. Their relations with the British Government are settled by treaties, according to which—

(1) they cannot have political dealings with foreign powers ;

(2) they are under the protection of the British ;

(3) they may manage their internal affairs as they like, but Government have the right to interfere in cases of necessity.

An officer, styled the **British Resident**, is stationed in each of these states to advise the ruler in his dealings with Government.

## II.—Foreign Possessions in India.

Some of the European nations, who fought with England for supremacy in India in the eighteenth century, still hold some possessions on the coast.

### (a) *French Possessions.*

(1) **Pondichery**, to the south of Madras, the residence of the French Governor-General ;

(2) **Karikal**, in Tanjore ;

(3) **Mahe**, on the Malabar coast ;

(4) **Yanaon**, on the coast of the Godavari delta ;

(5) **Chandranagar**, on the Hugli, twenty miles above Calcutta.

### (b) *Portuguese Possessions.*

(1) **Goa**, on the west coast, south of Bombay ;

(2) **Daman**, on the coast of Gujarat ;

(3) **Diu**, an island south of Kathiawar.



## QUESTIONS.

1. Give a short account of the Government of India.
2. How is India divided for purposes of administration ?
3. What parts of India are called the *Native States* ?
4. In what relation do the Native States stand to the British Government ?
5. Name the French and Portuguese possessions in India.

## CHAPTER VIII.

## THE UNITED PROVINCES OF AGRA AND OUDH.

## I.—Boundaries.

The United Provinces of Agra and Oudh are bounded on the *north* by Nepal and Tibet, on the *east* by Bengal, on the *south* by Central India, and on the *west* by Rajputana and the Panjab.

## II.—Mountains.

The mountain ranges running through the United Provinces are :—

- (1) A portion of the **Himalayas** (here called the **Siwaliks** and the **Garhwal Hills**), in the north ;
- (2) A portion of the **Vindhya**s, on the south ;
- (3) The **Kaimurs**, a continuation of the **Vindhya**s, running across Rewah and Mirzapur.

## III.—Rivers.

- (1) The **Ganges**, which descends into the plains at Hardwar ;
  - (2) The **Jumna**,
  - (3) The **Gumti**,
  - (4) The **Ghagra**,
- } the larger tributaries of the Ganges ;

- |                           |   |
|---------------------------|---|
| (5) The <b>Ramganga</b> , | } small tributaries of the Ganges ;                                   |
| (6) The <b>Sai</b> ,      |   |
| (7) The <b>Rapti</b> ,    |   |
| (8) The <b>Chambal</b> ,  | } tributaries of the Jumna, flowing<br>in the south of the Province ; |
| (9) The <b>Sind</b> ,     |   |
| (10) The <b>Betwa</b> ,   |   |
| (11) The <b>Dohson</b> ,  |   |
| (12) The <b>Ken</b> ,     |   |
- (13) The **Karamnasa**, forming the boundary between the U. P. and Behar.

#### IV.—Products and Industries.

The United Provinces are the great grain-growing parts of India. The chief products are *wheat*, *oil-seeds*, *sugarcane*, and *opium*.

In industries, Cawnpore takes the leading place, and possesses several cotton and woollen mills and leather factories. Benares is famous for brass work and gold brocade ; Lucknow for silver-work ; Moradabad for brass utensils ; Saharanpur for wood-carving.

#### V.—Railways.

The principal lines of railway running through the province are :—

- (1) The East Indian Railway ;
- (2) The Oudh and Rohilkhand Railway ;
- (3) The Rohilkhand and Kumaon Railway ;
- (4) The Bengal and North-Western Railway.

These railways connect all the important towns of the province with one another. The two great railway centres are Jhansi and Cawnpore. From Jhansi railway lines run to Bhopal and Bombay ; to Manikpur for Allahabad and thence to Calcutta and the Punjab ; to

Gwalior, for Agra and the north ; and towards Cawnpore for Lucknow. From Cawnpore lines go to Allahabad and Calcutta ; to Delhi and Lahore ; to Lucknow and to Farrukhabad and Muttra. From Allahabad there are branch lines to Fyzabad, another to Jaunpur, a third to Rai Bareili, a fourth to Benares, and a fifth to Jubbulpore.

### VI.—The People.

The people are of a mixed Aryan and Dravidian race, the Hindus forming the majority. The language spoken is Hindi and Urdu. The population is about 47 millions.

### VII.—Important Towns.

(1) **Allahabad**, the capital of the province, and the seat of the High Court and the Allahabad University, is situated at the confluence of the Ganges and Jumna. It is an important place of Hindu pilgrimage. The Fort, built by Akbar, stands just at the confluence. The Muir Central College is the leading college of the province.

(2) **Benares**, the centre of Hinduism, is situated on the left bank of the Ganges, and is famous for its fine temples.

(3) **Lucknow**, the largest town in Upper India, is situated on the Gumti, and was the capital of the Mahomedan kingdom of Oudh. It contains many fine buildings and gardens—Asafuddowla's Imambara, the La Martinere, the Kaisarbagh, the Chhuter Manzil, the Residency, the Shah Najaf, and the Museum ; and the Victoria Park and the Wingfield Park.

(4) **Cawnpore**, the trade centre of the province, is situated on the Ganges.

(5) **Agra**, on the Jumna, is famous for its historical associations. The Taj Mahal is known all over the world.

(6) **Hardwar**, (7) **Muttra**, (8) **Ajodhya**, are other places of Hindu pilgrimage.

(9) **Naini Tal**, on the hills, is the summer residence of the Lieutenant-Governor.

(10) **Bareilly**, the chief city of the Rohikhand division, is noted for its teakwood furniture ;

(11) **Meerut**, a city as old as the time of Asoka, and now an important military station ;

(12) **Ghazipur**, the Government's Depot for opium, and famous for its rose-water, also for containing the tomb of Lord Cornwallis ;

(13) **Mirzapur**, noted for its manufacture of shellac, and rugs and carpets ;

(14) **Kanauj**, a centre of ancient Aryan civilisation, and now famous for its perfumes ;

(15) **Moradabad**, a city in Rohilkhand, famous for its manufacture of plated brass utensils ;

(16) **Saharanpur**, the headquarters of the Jumna Canal establishment, and famous for its carved wood work ;

(17) **Roorkee**, the seat of the Thomason Engineering College ;

(18) **Aligarh**, famous for the Mahomedan Anglo-Oriental College ;

(19) **Jhansi**, an old walled city, and an important railway junction ;

(20) **Fyzabad**, the former capital of Oudh, under the Nawab Vizier.

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### QUESTIONS.

1. Name the Divisions of the United Provinces of Agra and Oudh.
2. Name the chief rivers of the province.
3. Describe the four largest towns of the province.
4. Mention some of the principal products and industries of the province. What are the chief food-crops? Which is the great industrial centre of the province?
5. Give the boundaries of the U. P. of Agra and Oudh.
6. What are the two great railway centres of the province?
7. Describe the people of the province.
8. Name half a dozen of the important towns of the U. P.

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## CHAPTER IX.

### BENGAL.

#### I.—Boundaries.

Bengal is bounded on the *north* by Nepal and Tibet, on the *east* by Assam and Burma, on the *south* by the Bay of Bengal and Madras, and on the *west* by Behar.

#### II.—Natural Features.

The centre of Bengal is a level plain, exceedingly well watered. The northern and south-eastern frontiers are hilly. The soil is the most fertile in the whole of India.

#### III.—Rivers.

- (1) The **Ganges**, which is known as the **Hugli**, or **Bhagirathi**, near Calcutta, and as the **Padma**, in the east.

#### IV.—Products and Industries.

Bengal stands first among the provinces of India for the production of *rice*, *jute*, and *oil-seeds*. *Tea* is grown in Darjiling. The hill region of West Bengal produces *lac* and *tassar silk*.

The most important *industry* of Bengal is *coal-mining*, and there are also large *iron factories* and *potteries*.

#### V.—Railways.

Bengal is intersected by Railways. There are railways running (1) southwards and eastwards from Calcutta to the sea coast ; (2) northwards to the Ganges and thence to Darjiling ; (3) north-westwards to Delhi, and thence up to Simla ; (4) westwards to Bombay *via* Nagpur ; (5) from Calcutta to Madras along the east coast.

The principal railways of Bengal are :—

- (1) the East Indian Railway ;
- (2) the Bengal-Nagpur Railway ;
- (3) the Eastern Bengal State Railway ;
- (4) the East Coast Railway.

There are many other branch lines connecting Calcutta with other places in Bengal.

#### VI.—People.

The population is near  $45\frac{1}{2}$  millions, the bulk being Hindus. In Bengal proper the people are of a mixed Dravidian and Mongolian race. The language spoken is Bengali.



**VII.—Chief Towns.**

(1) **Calcutta**, the capital of Bengal and upto 1911, the capital of India, on the left bank of the Hugli. It has many fine modern buildings, including Government House and other public offices. Calcutta is the seat of a University and has numerous colleges. It is, next to Bombay, the largest commercial centre in India.

(2) **Murshidabad**, the capital of Bengal under the Nawabs.

(3) **Darjiling**, a hill station, the seat of the Bengal Government in the hot weather.

(4) **Dacca**, formerly the capital of the province of Eastern Bengal and Assam, and formerly famous for its fine muslins ; it is now a great jute manufacturing town.

(5) **Chittagong**, an important seaport ;

(6) **Sirajgunj**, **Naraingunj**, **Goalondo**, are other centres of jute traffic and river traffic, in Eastern Bengal.

(7) **Kuch Behar**, the chief town of the native state of that name.

(8) **Nadia**, a famous place of Sanskrit learning.

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**CHAPTER X.****BEHAR AND ORISSA.****I.—Boundaries.**

Behar is situated between Bengal and the United Provinces. Orissa extends along the north-western coast of the Bay of Bengal, from the Chilka Lake to a little beyond the mouth of the Subarnarekha. Chota Nagpur.



which also forms part of the province, consists of some hilly district between Behar and the Central Provinces.

## II.—Natural Features.

Behar is mostly a fertile plain on both banks of the Ganges. Orissa has a seacoast which is low and marshy, though there are fertile tracts inland. Chota Nagpur is chiefly a tableland, the highest point of which is PARASNATH, a hill 4,500 feet high.

## III.—Rivers.

(1) The **Ganges**, which traverses the province; (2) the **Gandak**, (3) the **Sone**, both tributaries of the Ganges; (4) the **Mahanadi**; (5) the **Brahmani**, and (6) the **Baitarni**, all rivers of Orissa.

## IV.—Products and Industries.

Behar resembles Bengal proper in soil and products. Rice, wheat and barley are largely grown, and so also is opium. The mineral resources consist chiefly of coal.

## V.—Railways.

The principal railway lines running through the province are :—

- (1) the East Indian Railway;
- (2) the Bengal and North-Western Railway.

## VI.—People.

The population is  $34\frac{1}{2}$  millions, and the people are of a mixed Dravidian and Mongolian race, and the great majority are Hindus. The languages spoken are Hindi, Urdu and Uriya.

**VII.—Chief Towns.**

(1) **Patna**, with its civil station **Bankipur**, and its military station **Dinapur**, is the capital of the province ;

(2) **Gaya**, a noted place of Hindu pilgrimage ;

(3) **Muzaffarpur**, the chief town in Western Tirhut ;

(4) **Darbhanga**, the chief town in East Tirhut ;

(5) **Arrah**, the chief town in Shahabad ; west of it is **Buxar**, where a famous battle took place in 1764 ;

(6) **Monghyr**, an ancient town noted for its mineral spring called Sitakund ;

(7) **Bhagalpur**, noted for its silk manufactures ;

(8) **Cuttack**, the largest town in Orissa ;

(9) **Balasore**, a small port in Orissa, and now a famous health resort ;

(10) **Puri**, on the Orissa coast, is famous for the temple of Jagannath ;

(11) **Ranchi**, and (12) **Hazaribagh**, are important towns in Chota Nagpur.

**ASSAM.**

Assam is a long narrow valley watered by the Brahmaputra. The north and south are hilly, the chief hills being the **Naga**, the **Jaintia**, and the **Garó**. These hills are still peopled by wild tribes. The chief product of Assam is tea. The principal towns of Assam are :—

(1) **Gauhati**, the capital, on the Brahmaputra ;

(2) **Shillong**, the summer seat of the Assam Government.

- (3) **Sibsagar**, the centre of the tea plantations ;
- (4) **Sylhet**, noted for its oranges.

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### QUESTIONS.

1. Give the exact position of Behar and Orissa.
2. Describe the natural features of the province.
3. Name the chief rivers of Behar and Orissa.
4. What are the chief products of Behar ?
5. Name the principal railways running through the provinces.
6. To what race do the people of Behar and Orissa belong ? What language do they speak, and what is the population of the province ?
7. Name six of the chief towns of Behar, Orissa, and Chota Nagpur, and state for what each is famous.

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## CHAPTER XI.

### THE CENTRAL PROVINCES AND BERAR.

#### I.—Boundaries.

The Central Provinces are bounded on the *north* by Central India and Bengal, on the *east* by Bengal and Madras, on the *south* by Madras and Hyderabad, on the *west* by Berar, Bombay, and Central India.

#### II.—Natural Features.

The Central Provinces lie altogether in the hill country of Southern and Central India, and include the upper valley of the Nerbada, the Mahanadi, and the Wainganga.

### III.—Mountains and Rivers.

The only range in the Province is the **Satpura Range**, running in a westerly direction. The Province is the birth-place of many rivers :—

- (1) the **Narbada**, and the **Tapti**,—flowing out to the west ;
- (2) the **Wardha**, to the south-east ;
- (3) the **Wainganga**, and **Indavati**, to the south ;
- (4) the **Mahanadi**, to the east ;
- (5) the **Ken** and **Sone**, to the north.

### IV.—Products and Industries.

The C. P. produce large quantities of *wheat* and *cotton*. The upper valley of the Mahanadi, called the **Chattisgarh plain**, is one of the most fertile tracts in the province. The mineral resources of the province include *coal* and *iron*. The principal coal mines are at **Mohpani** and **Warora**.

### V.—Railways.

The principal lines of railway running through the province are :—

- (1) the **Bengal-Nagpur Railway**.
- (2) a branch of the **East Indian Railway**, from **Jubbulpore** to **Allahabad**.

### VI.—People.

The people are **Dravidians** in race and **Hindus** in religion. The languages generally spoken are **Hindi** and **Marathi** ; but the hill tribes speak *Gondi*. The population is thin, and numbers about 14 millions. The province was anciently called *Gondwana*.

### VII.—Chief Towns.

- (1) **Nagpur**, the present capital of the province, and formerly the capital of the Bhonsla raja ;
- (2) **Jubbulpore**, the chief place in the Narbada valley. Near it are the famous Narbada Falls and the Marble Rocks.
- (3) **Pachmarhi**, in the Satpura hills, is the summer seat of the Government.
- (4) **Kamptee**, the chief military station of the province ;
- (5) **Saugor**, another cantonment town, and the seat of a large cattle fair ;
- (6) **Burhanpur**, famous for its manufactures of silk and gold thread ;
- (7) **Hinganghat**, a town of historical importance.

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### BERAR.

Berar, which formed part of the Nizam's Dominions, is now administered by the Chief Commissioner of the Central Provinces. It is bounded on the north and east by the Central Provinces, on the south by the Nizam's Dominions, and on the west by Bombay. The chief *rivers* are the **Punna**, flowing into the Tapti, and the **Wardha**, flowing into the Godavari. The *soil* is very fertile, and produces large quantities of wheat and cotton. The *population* is about 3 millions. The *chief towns* are Akola, Amraoti, and Ellichpur.

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### QUESTIONS.

1. Give the boundaries of the Central Provinces.
2. Describe the chief physical features of the C. P., giving the names of its chief mountains and rivers.

3. Name the chief products and mineral resources of the province.
4. Name the principal lines of railways in the province.
5. Describe the people of the C. P. What was the ancient name of the province?
6. Name the chief towns, divisions, and districts of the C. P.
7. Give a short account of Berar.

## CHAPTER XII.

### THE MADRAS PRESIDENCY.

#### I.—Boundaries.

The Madras Presidency is bounded on the *north* by Bombay, Mysore, Hyderabad, the Central Provinces and Bengal; on the *east* by the Bay of Bengal; on the *south* by Palk Strait and the Gulf of Manaar; and on the *west* by the Arabian Sea.

#### II.—Mountains and Rivers.

The mountain ranges of the province are:—(1) the **Eastern Ghats**, (2) the **Western Ghats**, (3) the **Nilgiris**, (4) the **Anamalais**, (5) the **Palnais**, and (6) the **Shevaroy**s.

The chief rivers of the Presidency are:—(1) the **Godavari**, (2) **Krishna**, (3) **North Pennar**, (4) **Palar**, (5) **South Pennar**, (6) **Kaveri**, and (7) **Vaijai**,

#### III.—Products.

The products are chiefly agricultural. *Rice* is grown in the Godavari, Krishna and Kaveri deltas, and on the west coast. The other crops grown are *millets*, *oil-seeds*, *cotton*, *sugarcane*, *spices* (such as betel and pepper), *tobacco*, *tea* and *coffee*. The only mineral product of any importance is *manganese*.

**IV.—Railways.**

Madras is connected by rail with Bombay, Tuticorin, and Beypur, on the west coast ; and with Waltair and thence with Calcutta by a section of the Bengal-Nagpur Railway.

**V.—People.**

The people are of Dravidian race, and mostly Hindus. The population is over 41 millions. The languages spoken are Tamil, Telugu, and Malayanam.

**VI.—Chief Towns.**

(1) **Madras**, founded in 1639, is the capital of the Presidency. It is the seat of a High Court, and a University ; and has a harbour, which is, however, not of much importance for trade.

- |  |   |                                  |
|--|---|----------------------------------|
| (2) <b>Gopalpur,</b>   | } | seaport towns on the east coast. |
| (3) <b>Vizagapatam,</b>  |   |                                  |
| (4) <b>Masulipatam,</b>  |   |                                  |
| (5) <b>Golconda,</b>   |   |                                  |
| (6) <b>Negapatam,</b>  |   |                                  |
| (7) <b>Tuticorin,</b>  |   |                                  |
| (8) <b>Beypur,</b>   | } | on the west.                     |
| (9) <b>Cannanore,</b>  |   |                                  |
| (10) <b>Mangalore,</b>   |   |                                  |
| (11) <b>Calicut,</b>   |   |                                  |
| (12) <b>Madura</b> , famous for its old Hindu temple.            |   |                                  |
| (13) <b>Trichinopoly</b> famous for its cigars and jewellery.    |   |                                  |
| (14) <b>Ootacamund</b> , on the Nilgiris, is the summer capital. |   |                                  |

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**QUESTIONS.**

- 1 Give the boundaries of the Madras Presidency.
2. Name the chief mountains and rivers of Madras.



3. Mention the chief products of Madras.
4. Name the principal railways of Madras.
5. Describe the people of Madras, giving particulars of population, religion, race, and language.
6. Name the important towns of Madras.

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## CHAPTER XIII.

### THE BOMBAY PRESIDENCY.

#### I.—Boundaries.

The Bombay Presidency is bounded on the *north* by Beluchistan and the Punjab ; on the *east* by Rajputana, Central India, the Central Provinces, Hyderabad and Madras ; on the *south* by Mysore and Madras ; and on the *west* by the Arabian Sea.

#### II.—Natural Features.

The Bombay Presidency may be divided as follows :—

- (1) **Sind**, lying between Beluchistan and the Rann of Cutch, and consisting of a flat sandy desert ;
- (2) **Gujarat**, including the peninsulas of Kathiawar and Cutch, and a broad strip of plain stretching up to the mouth of the Luni ;
- (3) the Coast strip, between the Western Ghats and the Sea, called the **Konkan** ;
- (4) **Bombay Deccan**, a portion of the tableland behind the Ghats.

#### III.—Mountains.

- (1) The **Western Ghats**, running south parallel to the coast ;

(2) the **Rajpipla Hills**, a continuation of the Western Ghats north of the Narbada, and connected with the Aravalli Hills of Rajputana ;

(3) **Mount Girnar**, in Kathiawar, rising to 3,000 feet ;

(4) **Mount Abu**, to the north of Gujarat, rising to 5,000 feet.

#### IV.—Rivers.

(1) The **Narbada** and **Tapti**, flowing through Broach and Surat ;

(2) the <b>Rewa</b> ,	} small rivers flowing to the north of the Narbada and Tapti ;
(3) the <b>Mahi</b> ,	
(4) the <b>Luni</b> ,	

(5) the **Indus**, flowing through Sind ;

(6) the **Godavari**, flowing through Bombay Deccan ;

(7) the **Krishna**, with its tributaries, the **Bhima** and **Tungabhadra**, flowing through Bombay Deccan.

#### V.—Products and Industries.

The chief products of Bombay are *wheat* and *cotton*. Bombay city is a great industrial and manufacturing centre, and has numerous cotton and woollen mills.

#### VI.—Railways.

Bombay is connected by rail with Madras, and from this line a branch runs through the Deccan parallel to the Ghats, and another branch to Goa. It is connected with Calcutta, *via* Nagpur and Jubbulpore, the northern line sending branches to Cawnpore, Ajmere, and Agra. A line also runs north to Ahmadabad, Ajmere and Delhi. From Karachi the North-Western railway runs to Lahore, and thence to Quetta and Pishin.

The principal railway lines are:—

- (1) the Great Indian Peninsula Railway;
- (2) the Bombay, Baroda, and Central India Railway;
- (3) the Bengal-Nagpur Railway;
- (4) the North-Western Railway.

#### VII.—People.

The population is over  $19\frac{1}{2}$  millions, and, except in Sind, the majority are Hindus. The chief race is a mixed Dravidian. The languages spoken are Sindhi, Gujrati, and Marathi. The **Parsis**, who form the bulk of the population of Bombay city, are of Persian origin and are fire-worshippers.

#### VIII.—Chief Towns.

(1) **Bombay**, the capital of the province, and the chief seaport of all India. It is centre of the cotton trade, and is the seat of a University and a High Court.

(2) **Karachi**, the chief town of Sind, is also an important seaport.

(3) **Poona**, the old capital of the Mahratta Peshwas, and now a large military station;

(4) **Ahmadabad**, the old capital of the Mahomedan kingdom of Gujarat, and an important manufacturing town now.

(5) **Ahmadnagar**, } capitals of old Mahomedan king-  
(6) **Bijapur**,     } doms.

(7) **Surat**, the first English settlement in India;

(8) **Baroda**, the capital of the Gaekwar's dominions;

(9) **Rajkot**, the seat of a famous Chief's College;

(10) **Sholapur** and (11) **Dharwar**, both cotton towns in the **Bombay Carnatik**;

(12) **Mahabaleshwar**, a hill-station on the **Western Ghats**.

**Aden**, south of **Arabia**, and **Perim** in the **Red Sea**, are under the **Government of Bombay**.

### QUESTIONS.

1. Give the boundaries of the **Bombay Presidency**.
2. Into what four regions may **Bombay** be divided?
3. Name the chief mountains and rivers of **Bombay**.
4. Mention the chief products and industries of **Bombay**.
5. Name the railways running through the **Bombay Presidency**.
6. Give a short account of the people of **Bombay**, giving particulars of race, religion, and language. Who are the **Parsees**?
7. Name the important cities and towns of the **Bombay Presidency**.
8. Where are **Aden** and **Perim**?

## CHAPTER XIV.

### THE PUNJAB.

#### I.—Boundaries.

The **Punjab** is bounded on the *north* by **Kashmir**; on the *east* by the **United Provinces** and **Tibet**; on the *south* by **Rajputana**; and on the *west* by the **North-West Frontier Province**.

#### II.—Natural Features.

- (1) A mountain region in the north-east;
- (2) a tableland (from 1,000 to 2,000 feet high) lying north of the **Salt Range**, and between the **Indus** and **Jhelum**;
- (3) a flat plain sloping south-westwards.

### III.—Mountains.

- (1) The **Himalayas**, on the north and north-east ;
- (2) the **Salt Range**, between the Jhelum and the Indus ;
- (3) the **Pir Panjal Range**, a part of the Himalayas, between Rawalpindi and Kashmir.

### IV.—Rivers.

The name *Punjab* is derived from the fact that the province is drained by the five rivers, the **Sutlej**, the **Beas**, the **Ravi**, the **Chenab**, and the **Jhelum**. These form a united stream called the **Panjnad**, which then falls into the **Indus**. The **Saraswati** and the **Ghaggar** lose themselves in the desert.

### V.—Products and Industries.

The chief products are *wheat* and *barley*, but *millets* and *pulses*, *sugarcane*, *cotton*, and *rice* are also grown. *Tea* is grown in the Kangra district. The chief industries are the mining of salt (which is hence popularly called *Lahouri Salt*), the pressing and weaving of cotton, and the manufacture of carpets (at Amritsar).

### VI.—Railways.

The Punjab is traversed in every direction by the North-Western Railway and its branches. Lahore forms the centre of the line—one branch going eastwards to Saharanpur and Calcutta ; another going north-west to Peshawar ; and a third going south-west to Multan and Karachi. The eastern branch is connected with Jeypur and Delhi, and through these, with Bombay and Calcutta. Another railway line connects Delhi with Kalka, at the foot of the Himalayas, and thence a line goes up the hills to Simla.

## VII.—People.

The people are nearly pure Aryans in race. The population numbers 20 millions, and the majority are Mahomedans. The **Sikhs** also form a large percentage of the population. The language spoken is Punjabi.

## VIII.—Chief Towns.

(1) **Lahore**, the capital of the Punjab, and formerly the capital of Ranjeet Singh. It is the seat of a University and a Chief Court.

(2) **Delhi**, which is again the capital of India is a large and flourishing city, decorated with some of the finest buildings in the world. The Imperial Durbars of 1877, 1903, and 1911 were held in Delhi. It is also a great railway centre, and has a large trade in cotton, cloth and metal goods, jewellery, glass and pottery. It is now governed by a Chief Commissioner of its own.

(3) **Amritsar**, the religious centre of the Sikhs, is famous for its "Golden Temple" and its manufacture of shawls and carpets.

(4) **Multan**, famous for its manufacture of ornamental pottery and tiles.

(5) **Sialkot**, famous for its manufactures of cutlery, arms and sporting goods.

(6) **Rawal Pindi** is a large military station.

(7) **Simla**, on the outer Himalayas, is the summer capital of the Government of India.

(8) **Ambala**, an important military station ;

(9) **Ludhiana**, famous for the manufacture of shawls ;

(10) **Dalhousie**, (11) **Dharamsala**, and (12) **Murree**, are hill stations in different parts of the province.

## QUESTIONS.

1. Give the boundaries of the Punjab.
2. Into what regions may the Punjab be naturally divided?
3. Describe the physical features of the Punjab, giving the names of its chief mountains and rivers.
4. Name the chief products and industries of the Punjab.
5. Describe the railway system of the Punjab.
6. Give an account of the people of the Punjab, giving particulars of race, religion, and language.
7. Name the most important towns of the Punjab, and state for what each is famous.

## CHAPTER XV.

## THE NORTH-WEST FRONTIER PROVINCE.

## I.—Boundaries.

The North-West Frontier Province is bounded on the *north* and *west* by Afghanistan, on the *east* by Kashmir and the Punjab, and on the *south* by Beluchistan and the Punjab.

## II.—Mountains and Railways.

The country is full of mountains and the rivers form the only means of communication. The principal ranges are the **Sulemans** and the **Safed Koh**, on the west of the province. The chief river of the province is the **Kabul River**, which is a tributary of the Indus.

## III.—Population and Chief Towns.

The population of the province is a little over 2 millions. The chief towns are :—

(1) **Peshawar**, an important military outpost and a trade centre.



(2) **Kohat**, commanding the Kurram Valley :

(3) **Dera Ismail Khan**, near the confluence of the Indus and Gomul.

#### IV.—Railways.

The North-Western Railway connects Peshawar with Lahore, and thence with Calcutta and Bombay.

#### V.—Divisions and Districts.

The province was formed in 1901 by the transfer from the Punjab of certain districts, and by the addition of the following political charges—Kurram, Malakand, Khaibar, Tochi, Karnal, and Shirani.

##### *Divisions.*

**Peshawar**

**Derajat**

##### *Districts.*

Peshawar, Kohat, Hazara.

... Bannu, Dera Ismail Khan.

#### QUESTIONS.

1. Give the boundaries of the N.-W. Frontier Province.
2. Name the chief mountains and rivers of the province.
3. What is the population of the province? Name its chief towns.
4. What means of communication do exist in the province?
5. Name the divisions and districts of the province.

#### CHAPTER XVI.

##### BRITISH BELUCHISTAN.

British Beluchistan comprises the three districts of **Pishin**, **Quetta**, and **Sibi**, lying to the north-west of Sind. **Sibi** is on the plain, but the rest of the province is a tableland about 5,000 feet high. The whole country is very dry and rainless, and so cultivation is carried on by

irrigation. The chief products are wheat and millets. The population is a little under four lakhs, almost entirely Mahomedan. The capital is **Quetta**, which contains a large garrison for the protection of the Bolan and Khojak passes leading from India to Afghanistan. Pishin is connected with the plain by two railway lines, one through Quetta and the Bolan ; the other through the Nari Pass.

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### QUESTIONS.

1. Name the three districts that compose the province of Beluchistan, and state how each of them is situated.
2. Give a short geography of Beluchistan, giving particulars of population, products, &c.

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## CHAPTER XVII.

### AJMERE-MERWARA.

This little province forms a patch of British territory in the centre of Rajputana. It includes two districts—**Ajmere**, consisting of an open sandy plain, and **Merwara**, a hilly country. The population is about 5 lakhs. The province is administered by the Agent to the Governor-General in Rajputana. The capital is Ajmere, which was the first Mahomedan settlement in Rajputana and contains one of the oldest mosques in India.

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## CHAPTER XVIII.

### COORG.

This little province lies to the south-west of Mysore, and has a climate like that of the latter country. The

chief products are rice, coffee, and cardamoms. The chief town is **Mercara**. The population is two lakhs. The province is governed by the **British Resident in Mysore**.

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## CHAPTER XIX. THE NATIVE STATES OF INDIA.

### I.—Kashmir.

Kashmir is the largest of the Native States in area. It lies on the northern frontier of India. The kingdom was founded by Golab Singh, one of the Subedars of Ranjeet Singh. It is divided into three provinces—(1) **Jammu**, in the lower hills on the borders of the Punjab; (2) **Kashmir proper**; and (3) **Ladakh**, in the upper Indus valley. The principal cities are **Srinagar**, the capital, and **Leh**, the chief town of Ladakh. Kashmir is famous for its shawl and embroidery work. Population, 3 millions.

### II.—Hyderabad.

Hyderabad is the foremost of the Native States in population, wealth and power. It lies in the Deccan. The kingdom was founded by Asaf Jah, one of the Subedars of the Moghal Emperors who bore the title of *Nizam*, which is still borne by the rulers of Hyderabad.

The *area* is equal to that of the Central Provinces, and the *population* over 13 millions. The *chief towns* are:—

(1) **Hyderabad**, the capital, is one of the most populous cities in India.

(2) **Golconda**, the ruined capital of a former kingdom, once famous for its diamonds.

(3) **Secunderabad**, the largest military cantonment in India.

(4) **Aurangabad** and (5) **Gulbarga**, both old capitals.

### III.—Mysore.

Mysore is a powerful Hindu state in the south. It is surrounded on all sides by the Madras Presidency. The *area* is about that of Oudh, and the population over  $5\frac{1}{2}$  millions. The important *towns* are :—

(1) **Mysore**, the capital of the state, contains **Seringapatam**, the famous stronghold of Hyder Ali and Tipu Sultan.

(2) **Bangalore**, a British military station.

(3) **Kolar**, celebrated for its gold mines.

### IV.—Baroda.

Baroda is a Mahratta state in Gujarat. It was founded in the eighteenth century by a Mahratta soldier of fortune whose family name was *Gaekwar*, a title still borne by the ruler. The population is nearly two millions, and the chief town is **Baroda**.

### V.—The States of the Central India Agency.

The Native States of the Central India Agency number 143. But the following alone are of any importance :—

(1) **Gwalior**, ruled by a Mahratta prince who bears the title of *Scindhia*.

(2) **Indore**, ruled by another Mahratta prince bearing the title of *Holkar*.

(3) **Rewah**, a Hindu state in Baghelkhand. It contains the largest coal field yet discovered in India.

- (4) **Bhopal**, a Mahomedan state ruled by a Begum.

#### VI.—The States of the Rajputana Agency.

The Native states of the Rajputana Agency number 20. But the following only are important:—

(1) **Jeypur**, which is one of the most enlightened states of India. Its chief town, named Jeypur, is one of the finest Hindu cities in India.

(2) **Udaipur**, the parent state in Rajputana, was called Mewar in olden times. The ruler belongs to a family which ranks first among the Rajputs of all India, and which boasts that it has never given a daughter in marriage to an Emperor of Delhi.

(3) **Jodhpur** (anciently called *Marwar*) is the largest in area.

(4) **Bharatpur**,  
(5) **Alwar**,  
(6) **Dholpur**, } small states in Eastern Rajputana.

There are several small Native States situated in the midst of British provinces. These are superintended by the Lieutenant-Governor or Chief Commissioner of the province within which they lie. Thus the Punjab has the four Sikh states of **Patiala**, **Nabha**, **Jhind** and **Faridkote**, and the Mahomedan state of **Bhawalpur**. Madras has **Travancore** and **Cochin**. The United Provinces contain **Rampur** and **Garhwal**.

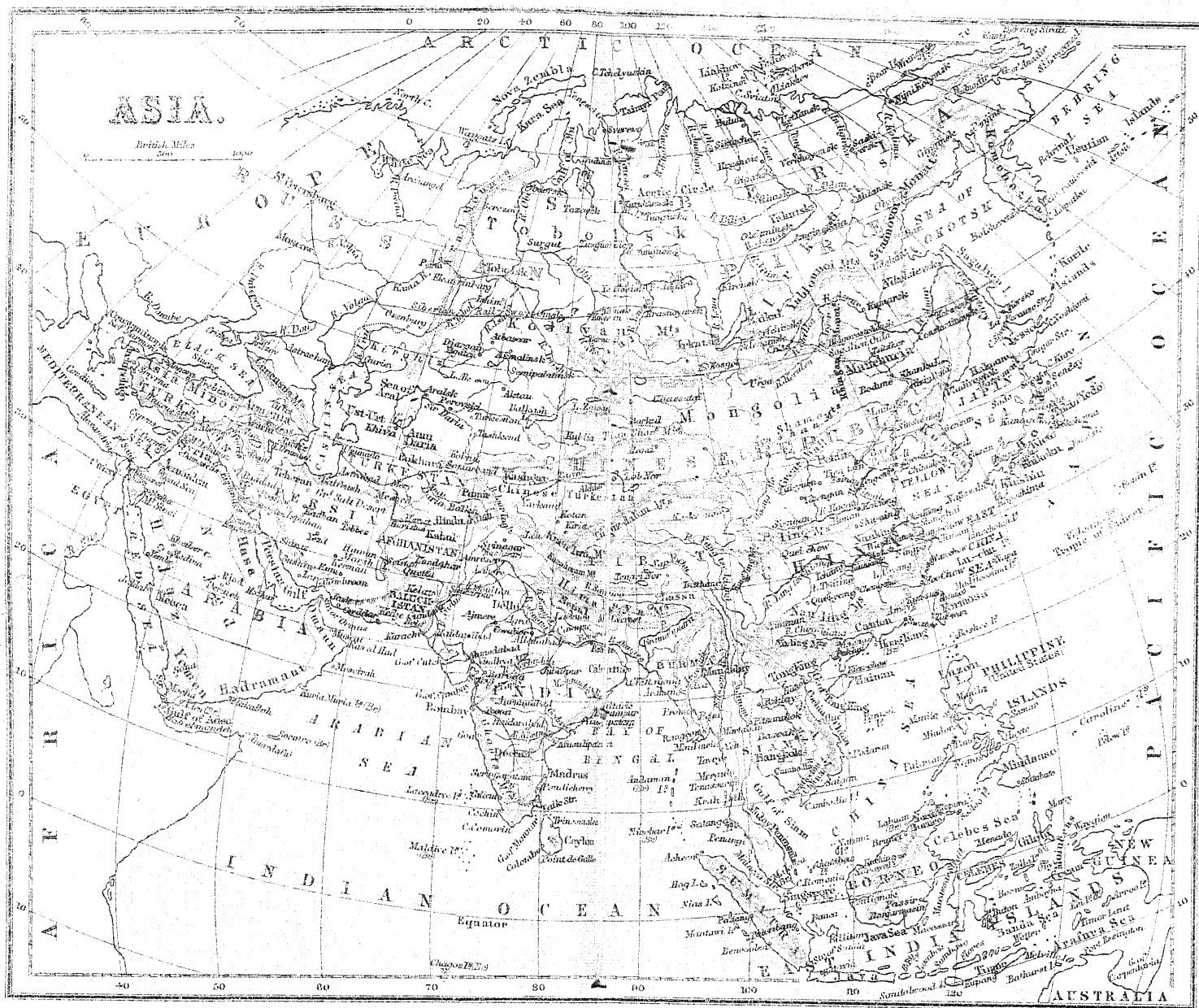
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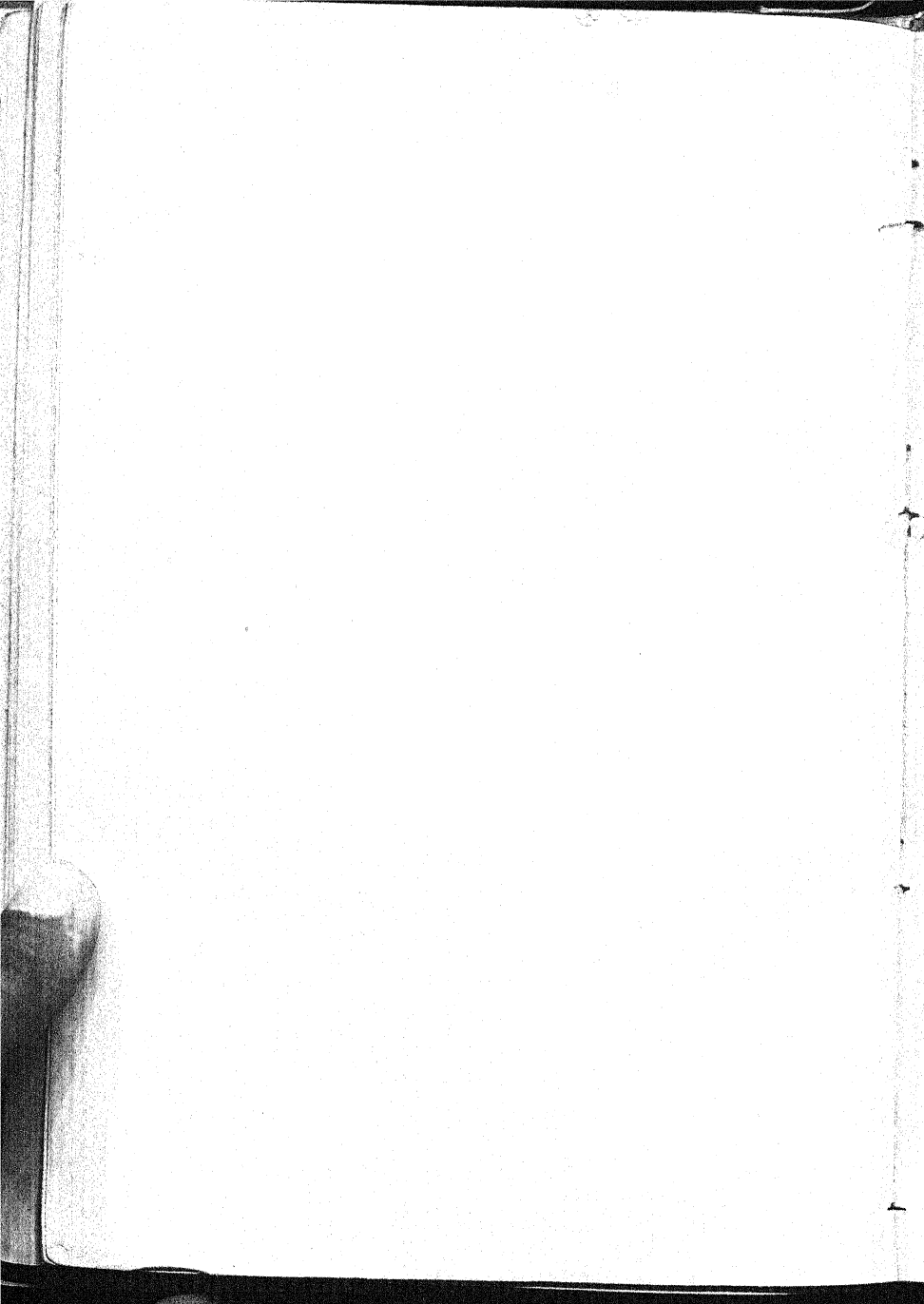
## QUESTIONS.

1. What and where is Ajmere? Give a short geography of the place.
  2. Where is Coorg?
  3. Name the principal Native States of India, and state where each is situated.
  4. Into what three provinces is the state of Kashmir divided?
  5. Name the important towns of Hyderabad and Mysore.
  6. What is the title of the rulers of Hyderabad, Baroda, Gwalior, and Indore?
  7. What special distinction does the Maharana of Udaipur's family bear?
  8. Name the principal Native States lying within British provinces.
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BOOK II.  
**ASIA.**







# ASIA.

## CHAPTER I.

### BOUNDARIES AND EXTENT.

#### 1. Boundaries.

On the North : the Arctic Ocean.

On the East : the Pacific Ocean.

On the South : the Indian Ocean.

On the West : Europe, the Black Sea, the Mediterranean Sea, and the Red Sea.

The boundary between Asia and Europe is a line drawn along the Black Sea, the Caucasus Mountains, and the Caspian Sea ; then from the north end of the sea up the Ural river to the Ural Mountains ; thence northwards to the Arctic Ocean.

Asia is joined to Africa by the Isthmus of Suez ; and to America by the Behring Strait ; while with Europe it forms a continuous land-mass.

#### 2. Size.

The greatest *length*, north to south, from Cape Chelyuskin to Cape Romania is about 5,300 miles ; and the greatest *breadth*, east to west, from East Cape to the Suez Canal is about 6,700 miles. The total *area* is about 16 million square miles.

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#### QUESTIONS.

1. Give the geographical boundaries of Asia.
2. Describe the course of the boundary line between Europe and Asia.
3. What is the greatest length and the greatest breadth of Asia ?

4. What is the total area of Asia ?
5. How is Asia connected with (1) Europe, (2) Africa, and (3) America.

## CHAPTER II.

### PENINSULAS, SEAS AND GULFS, AND ISLANDS.

#### 1. *Seas and Gulfs* :—

(1) The **Behring Sea**, a portion of the Pacific cut off by the Aleutian Isles—*on the north-east* ;

(2) the **Sea of Okhetsk**, a part of the Pacific cut off by the Aleutian Isles—*on the east* ;

(3) **Sea of Japan**, between Japan and the mainland,—*on the east* ;

(4) **China Sea**, between Borneo, the Philippines, and the mainland—*on the east* ;

(5) **Gulf of Siam**—*on the south-east* ;

(6) the <b>Yellow Sea</b> ,	} north of the East China
(7) <b>Gulf of Pechili</b> ,	
	Sea.

#### 2. *Islands* :—

(1) **Cyprus**, in the Mediterranean ;

(2) **Laccadives and Maldives**, in the Arabian Sea ;

(3) **Ceylon**,

(4) the **Andamans**,

(5) the **Nicobars**, } in the Bay of Bengal ;

(6) the islands of the **Eastern Archipelago**, comprising **Borneo, Sumatra, Java**, and the **Philippines**, towards the south-east of Asia ;

(7) **Hainan**,

(8) **Formosa**, } to the south and east of China ;

- (9) **Sakhalien**, } north of Japan ;  
 (10) the **Kuriles**, }  
 (11) the **Aleutian Isles**, in the Pacific Ocean.

3. *Peninsulas* :—

*In the west.*—**Asia minor** ;

*In the south.*—**Arabia, India and Indo-China**, (the southern part of which is called the **Malay Peninsula**).

*In the east.*—**Korea and Kamchatka**.

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**QUESTIONS.**

1. Name the principal seas and gulfs of Asia.
  2. Name the chief islands lying round about Asia.
  3. Name the peninsulas of Asia.
- 

**CHAPTER III.**

**MOUNTAINS AND RIVERS.**

1. *Mountains* :—

The great **Pamir Pleateau**, (called the “Roof of the World”) is the centre from which the main systems of mountains in Asia run. The chief of these ranges are :—

(1) The **Himalayas**, running south-east from Pamir, in the north of India ;

(2) the **Kuen Lun**, running eastwards, north of Tibet, with its branch the **Altyn Tagh** ;

(3) the **Hindu Kush**, in Afghanistan, from the southern edge of Pamir ;

(4) The **Thian Shan**, running north-east from Pamir, with the parallel ranges of the **Great and Little Altai**, north of it ;

(5) the **Peeling**, the **Nanling**, and the **Yung Ling**, in China ;

(6) the **Caucasus** and **Ural Mountains**, in the north-west of Asia, and forming part of the boundary between Europe and Asia.

These are all connected directly or indirectly with the central heights of Pamir. There are other mountains in Asia more or less detached from these ranges ; for example :

- (1) the **Elburz Mts.** in Persia ;
- (2) **Mount Arart**, in Turkish Armenia ;
- (3) **Mount Libanon**, in Syria ;
- (4) **Mount Sinai**, in Arabia ;
- (5) the **Vindhya**s, in the centre of India.

*Volcanoes :—*

A line of volcanoes begins from Sumatra and Java, and extends, through the Philippines and the Japanese and the Aleutian Islands, to the Kamchatka Peninsula.

2. *Rivers :—*

The rivers of Asia may be divided into two classes :—  
(1) those that flow to the sea ; and (2) those that lose themselves in inland seas or lakes.

*The following are among the first class :—*

- |   |  |
|---|--|
| (1) The <b>Obi</b> ,  | } flowing across the plain of Siberia into the Arctic Ocean ;      |
| (2) the <b>Yenisei</b> ,                                      |  |
| (3) the <b>Lena</b> ,   |  |
| (4) the <b>Euphrates</b>                                      | } flowing through the plain of Mesopotamia into the Persian Gulf ; |
| (5) the <b>Tigris</b> ,                                       |  |
| (6) the <b>Indus</b> , in India, flows into the Arabian Sea ; |  |



- |                                    |   |
|------------------------------------|---|
| (7) the <b>Ganges</b> and          | } flowing into the Bay of Bengal ;              |
| (8) <b>Brahmaputra</b> , in India, |   |
| (9) the <b>Irawadi</b> ,           |   |
| (10) the <b>Sitang</b> ,           |   |
| (11) the <b>Salwin</b> , in Burma, | } flowing through Siam, into the China Sea ;    |
| (12) the <b>Menam</b> ,            |   |
| (13) the <b>Mekong</b> .           |   |
| (14) the <b>Si Kiang</b> ,         | } flowing through China into the Pacific Ocean. |
| (15) the <b>Yangtse-Kiang</b> ,    |   |
| (16) the <b>Hoang-Ho</b> .         |   |

*The following are among the second class :—*

- |  |  |
|--|--|
| (1) the <b>Amu Darya</b> or Oxus,            | } flowing across the plains of Turkistan into the Aral Sea ; |
| (2) the <b>Sir Darya</b> or Jaxartes,        |  |
| (3) the <b>Tarim</b> , in Eastern Turkistan. |  |

### QUESTIONS.

1. What is Pamir? Show that the principal mountain ranges of Asia radiate from Pamir.
2. Name the chief mountains of Asia not directly connected with Pamir.
3. Into what two classes may the rivers of Asia be divided?
4. Name the rivers of Asia that flow into—(1) the Persian Gulf; (2) the Indian Ocean; (3) the Pacific Ocean.
5. Name three rivers of Asia that flow into inland seas or lakes.
6. Are there any volcanoes in Asia? If so, where are they?

### CHAPTER IV.

#### THE PEOPLES OF ASIA.

The chief races inhabiting Asia are :—

- (1) The **Mongolian** or *Yellow* race inhabits the greater part of the continent—namely, China, Japan,

Tibet, Siberia and portions of Turkistan and Burma. They are chiefly *Buddhists* in religion.

(2) The **Malay** race (which is a branch of the Mongolian) inhabits the Malay Peninsula and the islands to the south-east of Asia. They are distinguished by a light brown complexion, and are chiefly *Mahomedans*, though a large number of Christians live in the Philippines.

(3) The **Caucasian** or *White* race inhabits the Caucasus mountains in Western Asia, and parts of Central Asia, as well as Europe. This race has two branches—(a) the **Aryan**, and the (b) **Semitic**. The Arabs and Jews belong to the Semitic branch, and the rest are Aryans.

(4) The **Dravidians** mostly inhabit the south of India. They are distinguished by a dark complexion, and are chiefly *Hindus*.

(5) The **Negrito** or *Black* race is found in the Andamans and some parts of the Malay Peninsula and the Philippines. They are distinguished by very dark complexion, small stature and woolly hair.

But all the people everywhere are of mixed descent, for the following reasons :—

(a) Many of them had formerly no settled abode ;

(b) several different races have occupied the same country ;

(c) people of one race have married people of another.

## QUESTIONS.

1. Name the chief races of people inhabiting India, and mention the countries where they live.
2. What religion do the following generally profess—(1) the Malays ; (2) the Dravidians, (3) the Mongolians ?
3. What distinctive peculiarities of feature do the following races possess :—the Caucasians, the Mongolians, the Negritos ?
4. Why is it that the peoples of Asia are generally of mixed descent ?

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CHAPTER V.

## THE CLIMATES OF ASIA.

Asia is such a vast continent that every variety of climate is to be found in it. In the southern region the climate is *tropical*; in the central, *temperate*; and in the northern, *frigid*.

For instance, in Ceylon, the Malay Peninsula, and the south of India, the climate is exceedingly hot in summer, but it is often cloudy, and though there is practically no cold season, the climate is healthy, except in marshy and jungly tracts. Bengal, Assam, Burma, and Indo-China have a hot moist climate, and therefore are more unhealthy than Ceylon.

Over the rest of India, the climate is dry, except during the rainy season, (*vis.*, June, July, August, and September), which does not exist for Western Rajputana, Sind, Southern Punjab, and Beluchistan, which are practically rainless and so intensely dry. In all these parts of India, the summers are exceedingly hot—Upper Sind being one of the hottest places in the world. The winters too are proportionately severe. Hence the climate is one of extremes. Though generally healthy,

the country is subject to epidemics, especially during the change of the seasons, in October and March.

The climate grows colder and more healthy as we go north. In Siberia it is so cold in winter that the rivers and lakes are all frozen.

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### QUESTIONS.

1. Why is the climate of Asia so varied?
2. What kind of climate have Ceylon, the Malay Peninsula, and Southern India? And why?
3. Describe the climate of the eastern part of India.
4. What kind of climate do we find in central, northern, and western India?
5. State the kind of climate found in the northernmost part of Asia.

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## CHAPTER VI.

### POLITICAL DIVISIONS.

#### 1. **British Possessions in Asia.**

1. The **Indian Empire**, including **Burma**, east of the Bay of Bengal, and **Aden**, at the entrance of the Red Sea.
2. **Cyprus**, an island in the Mediterranean Sea.
3. **Ceylon**, the **Laccadives**, and the **Maldives**, in the Indian Ocean.
4. The **Strait Settlements**, in the Straits of Malacca.
5. **Hong Kong**, in the south of China.
6. **Sarawak** and **North Borneo**, in the large island of Borneo.

7. **Labanon**, a small island near Borneo.

2. **Other European Possessions in Asia.**

(a) *French possessions—*

1. **Cochin China** and **Tonquin**, with the dependent states of **Cambodia** and **Anam**, in the north-east of Further India.

2. **Pondichery**, **Mahi**, **Chandernagore**, and **Karikal**, in India.

(b) *Dutch Possessions—*

1. **Java**, and other smaller islands of the Eastern Archipelago.

2. The greater part of **Sumatra**, and the southern coasts of **Borneo**.

(c) *American Possessions—*

The **Phillippines**, in the Eastern Archipelago.

(d) *Portuguese Possessions—*

1. **Goa**, and a few other settlements in India.

2. **Macao**, in the south of China.

3. **Independent Kingdoms.**

1. The **Russian Empire**, with the dependent states of **Khiva** and **Bokhara** in Turkestan.

2. The **Chinese Empire**, with the dependent state of **Tibet**.

3. The **Japanese Empire**, with the dependency of **Korea**.

4. The **Turkish Empire**.

5. **Persia**.

6. **Afghanistan.**
7. **Beluchistan.**
8. **Siam.**
9. **Muscat, in Arabia.**
10. **Perak, in the Malay Peninsula.**

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### QUESTIONS.

1. Name the four principal Empires in Asia.
2. Name the British possessions in Asia.
3. What other European possessions are there in Asia?
4. Mention some of the smaller independent states of Asia.

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## CHAPTER VII.

### THE ISLANDS OF ASIA.

There are two kinds of islands : (1) *Continental*, or those that lie near to some continent from which they are separated by a shallow part of the sea ; and (2) *Oceanic*, or those that lie in deep ocean far away from any continent.

#### 1. Continental Islands.

(1) **Bombay and Salsette**, which form the present city of Bombay.

(2) **Diu**, on the coast of Kathiawar, belonging to the Portuguese.

(3) **Ceylon**, a large island in the Indian Ocean, and separated from India by the Palk's Strait and the Gulf of Manaar, which is crowded with a number of small islets, like the piers of a bridge, which are therefore

called **Adam's Bridge** or **Ram's Bridge**. The best known of these little islands is **Rameswaram**, a place of Hindu pilgrimage.

The *area* of Ceylon is a little larger than that of Oudh. The *surface* is hilly in the south and west, the best known mountain being **Adam's Peak**.

## 2. Oceanic Islands.

(1) The **Andamans** and **Nicobars** lie in the Bay of Bengal. The *soil* is very fertile, but little cultivated, and the *people* are mostly rude savages. One of these islands, Port Blair, is used as a penal settlement for convicts from India (and is called *Kālā Pānt* by the people).

(2) The **Laccadives** and **Maldives** lie to the west of South India. The *soil* is made of coral remains, and the *people* are peaceful fishermen or sailors.

### QUESTIONS.

1. Name and define the two kinds of islands.
2. Give a short account of Ceylon, and state to what kind of island it belongs.
3. Where are the Andamans and Nicobars? What is Port Blair?
4. What and where are the Laccadives and Maldives?

## CHAPTER VIII.

### INDO-CHINA AND THE ISLANDS OF THE EASTERN ARCHIPELAGO.

#### I.—Indo-China.

1. **Position and Extent**—Indo-China comprises Burmah, Siam, French Indo-China, and the Malay Peninsula.



2. **Rivers;**—(1) The **Irawadi**, and its tributaries the *Chindwin*, *Sitang*, and *Salwin*—in Burmah ;

(2) the **Menam** in Siam ;

(3) the **Mekong** or Cambodia, in Cochin China ;

(4) the **Song Kio** or Red River, in Tonquin.

3. **Mountains.**—The mountain region is still unexplored. The two chief ranges are—(1) the **Pegu Yoma**, and (2) the **Arakan Yoma**, on the east and west of the Irawadi valley, respectively.

4. **Population.**—The total population of Indo-China is about 40 millions.

## II.—Burmah.

1. **Position and Extent.**—Burmah comprises the western half of Indo-China, and forms part of the Indian Empire.

2. **Divisions.**—(1) **Upper Burmah**, or the valley of the Irawadi ;

(2) **Lower Burmah** (or Pegu), or the delta of the Irawadi ;

(3) **Arakan**, or a long strip of coast from Chittagong to Pegu ;

(4) **Tenasserim**, or a similar strip beyond the Gulf of Martaban.

3. **Chief Towns.**—(1) **Rangoon**, the capital of Burma, and the chief seaport ;

(2) **Mandalay**, the chief town in Upper Burmah ;

(3) **Ava**, the former capital ;

- (4) **Bhamo**, the highest point on the Irawadi which can be reached by steamers ;
  - (5) **Kindat**, in the valley of the Chindwin ;
  - (6) **Bassein**, another seaport in Lower Burmah ;
  - (7) **Akyab**, in Arakan ;
  - (8) **Moulmein**,
  - (9) **Tavoy**,
  - (10) **Mergui**,
- } seaports in Tenasserim.

### III.—Siam.

Siam is an independent state in the centre of Indo-China, at the head of the Gulf of Siam. Its capital is **Bangkok**. The only other important city is **Zimme**, on the Me-ping.

### IV.—French Indo China.

French Indo-China, with its dependencies of **Tonquin**, **Anam**, and **Cmbodia**, lies in the east of Indo-China. Its chief towns are—**Hanoi**, in Tonquin ; **Hue**, in Anam ; and **Saigon**, on the Mekong.

### V.—The Malay Peninsula.

1. **Position and Extent**.—The Malay Peninsula is joined to the mainland by the Isthmus of Kra.

2. **Divisions**.—(1) the **Straits Settlements**, which are under British possession, and comprise (a) the islands of **Singapore**, and **Penang** ; (b) **Malacca**, a district west of the Peninsula ; and (c) **Wellesley**, a district opposite Penang.

(2) The **Native States**, of which **Perak** is the most important.

3. **Climate and Productions.**—The climate is hot and moist. The chief mineral products are *tin*, *coal*, *antimony*, and *mercury*. The chief agricultural products are *rice*, *pepper*, *cloves*, *nutmegs*, *tobacco*, &c.

#### VI.—Islands of the Eastern Archipelago.

The Eastern Archipelago comprises the islands to the south-east of Asia. **Java** is the most populous and civilized of them all. The other important islands are—**Sumatra**, **Borneo**, **Celebes** and the **Phillippines**. The first three belong principally to the Dutch, and the last belongs to America. The total *population* is about 35 millions.

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#### QUESTIONS.

1. What parts of the world are comprised in the name Indo-China?
2. Give the names of the principal rivers and mountains of Indo-China.
3. Give a short geographical account of Burmah.
4. What and where is Siam?
5. What part of Indo-China is called French Indo-China?
6. Name the states that make up the Malay Peninsula. To whom does it principally belong?
7. Name the chief islands that compose the Eastern Archipelago.

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#### CHAPTER IX.

##### THE CHINESE EMPIRE.

The Chinese Empire is the richest and most populous country of Asia.

1. **Divisions.**—The Chinese Empire is made up of China Proper, and the dependencies of Manchuria, Mongolia, and Chinese Turkestan.

2. **Surface.**—Western China, Mongolia, Manchuria, and Turkestan are crossed by many high mountains. The central part of Mongolia is a large desert called the desert of Gobi. The deltas of the great rivers are very fertile and well cultivated.

3. **People.**—The total population is about 433 millions. The people belong to the Mongolian or yellow race, distinguished by light-brown complexion, short stature, and little hair on head and face. They are very intelligent and industrious, and have been civilized and educated for thousands of years.

4. **Products.**—China is rich in *minerals*, but little mining is done except the mining of coal in some parts. The *vegetable* crops include all those of India, as well as others, such as tea which is produced in large quantities.

5. **Chief towns.**—(a) *In China Proper.*—(1) **Pekin**, the capital, in the north ;

(2) **Canton**, in the south ;

(3) **Hangkow**, in the centre ;

(4) **Nankin**, (5) **Fu-chow**, (6) **Shanghai**, (7) **Lo-harg**, (8) **Tien-tsin**, and (9) **Amoy**.

(b) *In Turkestan.*—**Yarkand**.

(c) *In Mongolia.*—**Urga**.

(d) *In Manchuria.*—**Girin**.

6. **Islands.**—**Hainan** and **Formosa**, formerly belonged to China, but now to Japan. **Hong-Kong**, one of

the small islands, belongs to England, and was one of the most important seaports in the world.

---

### QUESTIONS.

1. Name the four chief divisions of the Chinese Empire.
2. What is the total population of the Chinese Empire? To what race do the Chinese belong, and what kind of people are they?
3. Name the chief mineral and agricultural products of China.
4. Name the chief towns of the Chinese Empire, and mention in what division they are situated.
5. Name the islands that lie off the coast of China, and state to whom they now belong.

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## CHAPTER X.

### THE JAPANESE EMPIRE.

1. **Divisions.**—Japan (or the “Empire of the rising sun”) consists of the islands of Yezo, Honshiu, Shikoku, and Kiushiu; Loo-choo and the Kuriles.
2. **Surface.**—The large islands are traversed by lofty mountain ranges containing many volcanoes. The northern ones are barren and unpopulated; the southern ones are fertile and populous.
3. **People.**—The population is about  $51\frac{1}{2}$  millions. The people are Mongolians by race, and are very intelligent and industrious, and have recently attained the first rank among the powers of the world.
4. **Chief Towns.**—(1) Tokio, the capital of the empire;  
(2) Kioto, the former capital;

- |                      |                                     |
|----------------------|-------------------------------------|
| (3) <b>Yokohama,</b> | } the chief seaports of the empire. |
| (4) <b>Nagasaki,</b> |                                     |
| (5) <b>Koba,</b>     |                                     |
| (6) <b>Osaka,</b>    | } the largest commercial towns.     |
| (7) <b>Nigata,</b>   |                                     |

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### QUESTIONS.

1. What country is signified by the name "Empire of the Rising Sun?"
2. Give the principal divisions of Japan.
3. Describe the surface features of Japan.
4. What is the population of Japan? What kind of people are the Japanese?

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## CHAPTER XI.

### ASIATIC RUSSIA.

Russia i.1 Asia is a continuation of Russia in Europe. It consists of the provinces of (1) **Siberia**, (2) **Russian Turkestan**, and (3) **Caucasia**.

#### I.—Siberia.

1. **Position and Extent.**—Siberia stretches across the north of Asia from the Ural Mountains to the Pacific. It is separated from Mongolia by the Altai Mountains, and from Manchuria by the river Amoor. It includes the portion of country bordering on Korea which was lately seized from China, and also the islands of Sakhalien to the north of Japan, as well as the Peninsula of Kamchatka.

2. **Rivers and Lakes.**—Siberia has the finest river-system in Asia. The principal rivers are the **Obi**, **Yeni-**



**sei, Lena and Amoor.**—The country also possesses many lakes, of which **Lake Baikal** is the largest.

3. **Climate, Soil, and Products.**—*The climate* is intensely cold. The *soil* is fertile, but there is little cultivation. The chief *products* are timber and minerals including some gold found near Lake Baikal.

4. **Chief Towns.**—(1) **Tobolsk** and (2) **Tomosk**, on two branches of the Obi; (3) **Yakutsk**, on the Lena; (4) **Irkutsk**, near Lake Baikal. (5) **Vladivostock**, on the Pacific, is an important naval station.

5. **People.**—The population is only eight millions, mostly Russian convicts.

## II.—Russian Turkestan,

1. **Position and Extent.**—Russian Turkestan is roughly bounded by Siberia on the north, the Pamir on the east, Persia and Afghanistan on the south, and the Caspian Sea on the west.

2. **Rivers.**—The chief rivers are—(1) the **Sir Darya**, (2) the **Amu Darya**.—flowing into the Aral Sea; and (3) the **Zarafshan**, which waters Bokhara.

3. **Climate, Soil and Products.**—*The climate* is very cold in winter, but fairly warm in summer. Much of the country is sandy desert, but along the great rivers and near the foot of the mountains the *soil* is fertile. The chief *products* are cotton and silk.

4. **Chief Towns.**—(1) **Samarkand**, (2) **Tashkand**, (3) **Khiva** and (4) **Bokhara**—all famous in ancient times.

5. **People.**—The population is about eight millions, all Mahomedans.



### III.—Caucasia.

1. **Position and Extent.**—Caucasia forms the westernmost division of Asiatic Russia, and consists of the provinces of **Georgia** and **Armenia**.

2. **People.**—The inhabitants of **Caucasia** are the most handsome in the world. The bulk of the population (totalling 11 ½ millions) is Christian, but some of the tribes are Mahomedans.

3. **Chief Towns.**—(1) **Tiflis**, the capital ;

(2) **Baku**, an important seaport on the Caspian, famous for its petroleum springs.

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### QUESTIONS.

1. Name the three chief divisions of Asiatic Russia, and state the boundaries of each.
2. Name the chief rivers and lakes of Siberia.
3. Describe the climate, soil, products, and people of Siberia.
4. Name the chief towns of Siberia and Russian Turkestan.
5. What part of Russia is known as *Caucasia*, and for what is it famous ?
6. What and where are Tiflis and Baku ?

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### CHAPTER XII.

#### ASIATIC TURKEY, ARABIA, PERSIA, AFGHANISTAN, AND BELUCHISTAN.

##### I.—Asiatic Turkey.

1. **Position and Extent.**—The Turkish Empire comprises the greater part of Western Asia and lies between the Black Sea and the Mediterranean. The chief divisions of Asiatic Turkey are :—(1) **Asia Minor** and (2)

**Armenia**,—in the north; (3) **Syria**, extending down the coast of the Mediterranean to the borders of Egypt; (4) **Mesopotamia**, extending down to the head of the Persian Gulf; and (5) the **Hejaz**, in Arabia, bordering on the Red Sea.

2. **Mountains and Rivers**.—The chief mountains are the **Taurus** and the **Antitaurus**, in Asia Minor; **Mount Lebanon**, in Syria; and the **Sinai Mountains** in Arabia.

The only important rivers are the **Tigris** and the **Euphrates** in Mesopotamia.

3. **Chief Towns**.—(1) **Damascus**, one of the oldest cities in the world.

(2) **Jerusalem**, the Holy City of Christianity, in Palestine;

(3) **Smyrna**, and (4) **Aleppo**, in Asia Minor;

(5) **Trebizond**, in Armenia;

(6) **Baghdad**, and (7) **Bassorah**, in Mesopotamia;

(8) **Mecca**, and (9) **Medina**, in the Hejaz, both the holiest places of the Mahomedans.

## II.—Arabia.

A portion of Arabia, *viz.*, the Hejaz, forms part of the Turkish Empire. The rest is either sandy desert, inhabited by a few wandering tribes (called *Bedouins*) or is divided into petty states. Of these the most important are **Oman** (or Muscut) at the entrance to the Persian Gulf, and **Nejd**, further inland. **Perim** and **Aden**, in and near the Straits of Bab-il-Mandeb, are British possessions.

### III.—Persia.

Persia lies to the east of Mesopotamia and Arabia. The country is fertile and productive in the north, but a sandy waste in the south. The **Elburz Mountains** are the only range. The people are distinguished for their polite manners and their artistic tastes. The chief towns are:—

- (1) **Teheran**, the capital, in the north ;
- (2) **Tabriz**, in the north-west ;
- (3) **Meshed**, in the north-east ;
- (4) **Shouster** and (5) **Isfahan**, in the centre ;
- (6) **Shiraz** (7) **Bushire**, and (8) **Bandar Abbas**, in the south.

### IV.—Afghanistan.

Afghanistan lies on the northern borders of India and to the east of Persia. The country is very mountainous and barren. The chief rivers are the **Hari Rud** and **Helmand**, which end in swamps, and the **Kabul river**, flowing into the Indus.

The king of Afghanistan, styled the Amir of Kabul, also rules a portion of Turkestan. The chief town of this tract of country is **Mazar-i-Shareef**. The hilly countries of **Badakhshan**, **Wakhan**, and **Shinghan** in the Pamir, also belong to Afghanistan.

### V.—Beluchistan.

Beluchistan lies to the south of Afghanistan. One portion of it belongs to the British and forms part of the Indian Empire. Native Beluchistan is a dry barren land and is ruled by the Khan of Kalat, with his capital at Kalat.

**QUESTIONS.**

1. Name the chief divisions of Turkey in Asia, and mention the names of any important towns in each.
  2. What do you know of Independent Arabia? To whom does the rest of Arabia belong?
  3. Can you name any British possession in or about Arabia?
  4. Name the chief towns of Persia.
  5. What and where is *Mazar-i-Shareef*?
  6. Where is Beluchistan? Into what two portions is the country divided?
-

BOOK III.  
EUROPE.



# EUROPE.

## CHAPTER I.

### BOUNDARIES AND EXTENT.

#### 1. Boundaries.

On the North : the Arctic Ocean.

On the East : the continent of Asia.

On the South : the Mediterranean Sea, and the Black Sea.

On the West : the Atlantic Ocean.

The boundary between Europe and Asia is an artificial one, the two continents naturally forming one continuous mass of land, which is sometimes called **Eurasia**. Europe is joined to Africa at the western end of the Mediterranean, the passage between them being called the **Straits of Gibralter**.

#### 2. Size.

The greatest *length* of Europe from Cape Finisterre in the west of Spain to the Caspian Sea near Baku, is about 3,600 miles : the greatest *breadth* from Cape Nordkyn in Norway to Cape Matapan in Greece, is about 2,400 miles. The total *area* is about  $3\frac{3}{4}$  million square miles.

### QUESTIONS.

1. Give the geographical boundaries of Europe.
2. Describe the course of the boundary line between Europe and Asia.
3. What is the greatest length and the greatest breadth of Europe?



4. What is the total area of Europe? Compare it with that of Asia.
5. How is Europe connected with (1) Asia, and (2) Africa?
6. What do you understand by the name *Eurasia*?

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## CHAPTER II.

### PENINSULAS, SEAS AND GULFS, AND ISLANDS.

#### 1. *Seas and Gulfs* :—

The **White Sea**, in the north of Russia, a portion of the Arctic Ocean ;

(1) the **Baltic Sea**, between Sweden and Russia ;

(3) the **North Sea**, or German Ocean, between Denmark and the British Isles ;

(4) the **English Channel**, between France and England ;

(5) the **Bay of Biscay**, west of France ;

(6) the **Mediterranean Sea**, between Europe and Africa, with its branches—

(a) the **Adriatic Sea**, between Italy and Turkey ;

(b) the **Ægæan Sea**, between Greece and Asiatic Turkey.

(7) the **Black Sea**, south of Russia.

#### 2. *Islands* :—

(1) *In the Arctic Ocean*—

**Spitzbergen** and **Nova Zembla**.

(2) *In the Atlantic Ocean* :—

**Iceland**, the **Faroe** islands, the **British Isles**, and the **Azores**.

(3) *In the Mediterranean Sea—*

The **Balearic Isles**, east of Spain ; **Corsica** ;  
**Sardinia** ; **Sicily** ; **Malta** ; and **Candia** or **Cret.**

(4) *In the Baltic Sea—*

**Zealand** and **Gothland.**

3. *Peninsulas—*

(1) The **Iberian Peninsula**, comprising Spain and  
 Portugal—*in the west.*

(2) **Italy**—*in the middle.*

(3) the **Balkan Peninsula**, comprising **Servia**,  
**Bulgaria**, **European Turkey**, and **Greece**—  
*in the east.*

(4) the **Scandinavian Peninsula**, comprising **Nor-**  
**way** and **Sweden**,—*in the north.*

(5) **Lapland**, running eastwards from the north  
 end of **Norway**.

(6) **Jutland**, forming part of **Denmark**.

(7) the **Crimea**, on the northern side of the **Black**  
**Sea.**

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**QUESTIONS.**

1. Name the principal seas and gulfs of Europe.
2. Name the principal branches of the **Mediterranean Sea**,  
 and state where they lie.
3. Give a list of the principal islands of Europe.
4. Name the islands of Europe that lie in the **Mediterranean**  
**Sea.**
5. What countries of Europe are known by the names of (1)  
 "the Balkans," (2) **Scandinavia** ; and (3) **Iberia** ?

## CHAPTER III.

## MOUNTAINS AND RIVERS, AND LAKES.

1. *Mountains*—

The greater part of Europe is level country, but in the centre there are high mountains. The principal mountain ranges run from east to west, like those of Asia. They are :—

(1) The **Alps**, the highest mountains in Europe, separating Italy from Austria and Switzerland. The principal branch of this range is the **Appenines**, running down the centre of Italy. The highest peak is **Mont Blanc**—which is the highest mountain in Europe.

(2) The **Balkans**, between the Black Sea and the Adriatic, with a branch known as **Mount Pindus**, in Greece, and another, the **Carpathians**, in Austria.

*N. B.*—The Balkans are connected with the Alps by a chain called the *Dinaric* and *Rhoetic Alps*, running round the north of the Adriatic.

(3) The **Pyrenees**, separating France from Spain.

(4) The **Sierra Nevada**, in the south of Spain.

(5) The **Scandinavian Mountains**, in Norway and Sweden.

*Volcanoes*—

(1) **Vesuvius**, in Italy ;

(2) **Etna**, in Sicily ;

(3) **Stromboli**, north of Sicily ;

(4) **Hekla**, in Iceland.

2. *Rivers*—

The water-parting of Europe lies along the line stretching from the Straits of Gibraltar to the Ural

Mountains. The general course of the rivers is north-westwards on one side, and south-eastwards on the other.

I. *Rivers flowing north-west—*

- (1) The **Guadalquivir**, in the south of Spain, flowing into the Atlantic.
- (2) The **Tagus**, flowing through Spain and Portugal into the Atlantic;
- (3) the **Garonne**, } flowing through France into
- (4) the **Loire**, } the Bay of Biscay;
- (5) the **Rhine**, } flowing through Germany into
- (6) the **Elbe**, } the North Sea;
- (7) the **Vistula**, flowing through Russia and Prussia into the Baltic Sea.

II. *Rivers flowing south-east—*

- (8) The **Volga**, flowing through Russia into the Caspian Sea;
- (9) the **Don**, }
- (10) the **Dnieper**, } flowing through Russia into
- (11) the **Dniester**, } the Black Sea;
- (12) the **Danube**, flowing through Germany, Austria and Roumania into the Black Sea;
- (13) the **Po**, in North Italy, flowing into the Adriatic;
- (14) the **Rhone**, in France, flowing into the Mediterranean.

*N. B.*—The largest river in Europe is the Volga, and the next, the Danube. The great river of Central Europe is the Rhine.

3. *Lakes.—*

- (1) **Ladoga**, **Onega**, and **Peipus**—*in Russia*.
- (2) **Wener**, **Wetter**, and **Malar**—*in Sweden*.
- (3) **Geneva**, **Neuchatel**, and **Constance**—*in Switzerland*.

- (4) Maggiore, Como, and Grada—in *Italy*.
- (5) The Balaton Lake (or Platten Sea)—in *Hungary*.

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### QUESTIONS.

- 1. What parts of Europe are mountainous, and what parts level? Name the principal mountain ranges.
- 2. Name the volcanoes of Europe, and state in what part each is situated.
- 3. Define *Waterparting*. What is the waterparting of Europe? How is this proved?
- 4. Name the rivers of Europe that fall into (1) the Mediterranean, (2) the Black Sea, and (3) the North Sea.
- 5. Name the principal lakes of Europe, and state where each is situated.

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## CHAPTER IV.

### THE PEOPLES OF EUROPE.

The inhabitants of Europe belong to the Caucasian stock, distributed in equal proportions among the three following races :—

- (1) the **Teutonic**, comprising the English, the Germans, the Dutch, and the Scandinavians ;
- (2) the **Romanic**, comprising the French, the Italians, the Spaniards, Portuguese, and Rumanians ;
- (3) the **Slav**, comprising the Russians, Poles, Servians, Bulgarians, the Czechs of Bohemia, and the Wends of Germany.

The prevailing *religion* of Europe is Christianity, though a few Mahomedans are to be found in Turkey and in southern and eastern Russia.

The *population* is estimated at 400 millions.

### QUESTIONS.

1. Name the chief races of people inhabiting Europe, and mention them and the countries where they live.
2. What religions are to be found in the countries of Europe?
3. What is the total population of Europe? Compare it with that of Asia.

## CHAPTER V.

### THE CLIMATE AND RAINFALL OF EUROPE.

#### 1. *Climate*—

The climate of Europe is on the whole colder than that of Asia. But parts of it enjoy a distinctly temperate climate, that is, one which is neither very hot in summer nor very cold in winter. This is due to the following causes:—

- (1) the influence of the Atlantic Ocean and the Gulf Stream;
- (2) the numerous gulfs and seas cutting into the coast;
- (3) the absence of high mountains on the coast;
- (4) the direction of the mountain ranges from east to west.

#### 2. *Rainfall*—

Over most of Europe rain falls at every time of the year; there is no special rainy season. In the countries round the Mediterranean rain falls chiefly in winter. The rainfall decreases as we go from west to east. The mountains of Norway and Britain receive a very heavy rainfall.



**QUESTIONS.**

1. Compare the climate of Europe with that of Asia.
2. Enumerate the circumstances which go to make the climate of Europe temperate.
3. Give some account of the rainfall of Europe.

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**CHAPTER VI.****POLITICAL DIVISIONS.**

Europe is divided into 23 independent states, that are classed into three groups, according to their moral and political influence over the nations of the world :—

*Class I.*—Great Britain, France, Germany, Russia, Austria—commonly called “ the five great powers.”

*Class II.*—Italy, Belgium, Holland, Norway and Sweden, Turkey, Spain.

*Class III.*—Denmark, Portugal, Switzerland, and Greece.

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**QUESTIONS.**

1. Into how many independent states is Europe divided? Name them.
2. Name the “ five great powers ” of Europe.
3. Into how many classes are the countries of Europe divided, and why?

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**CHAPTER VII.****THE BRITISH ISLES.****1. Position and Extent.**

The British Isles consist of the large island of **Great Britain**, lying to the north of the English Channel, and



the smaller island of **Ireland** in the Atlantic, to the west, together with many still smaller islands off their coasts. The *area* of Great Britain and the small island adjacent to it, is about 90,000 square miles ; that of Ireland, 32,000 square miles.

## 2. Seas and Gulfs.

- (1) The **English Channel**, between Great Britain and France—the narrowest part of it being called the **Straits of Dover**;
- (2) the **Irish Sea**, between Great Britain and Ireland, having two entrances :
  - (a) the southern—called **St. George's Channel** ;  
and
  - (b) the northern—called the **North Channel**.

Round the west and north coasts of both islands, are many bays and arms of the sea, such as Plymouth Harbour, Mount's Bay, Cardigan Bay, Firth of Forth, &c.

## 3. Islands.

- (1) The **Shetlands** and **Orkneys**, two groups of islands lying to the north of Scotland ;
  - (2) the **Hebrides**, another group lying on the west coast of Scotland ;
  - (3) **Anglesea**,
  - (4) **The Isle of Man**,
- } in the Irish Sea.
- (5) **The Isle of Wight**, in the English Channel.
- The smaller ones number several hundred.

## 4. Surface Features—Mountains.

The greater part of England is a gently sloping plain, but Wales is hilly. A range of hills called the **Cheviots**

divides England from Scotland, and the northern portion of Scotland is so hilly that it is called the **Highlands**. Ireland is generally level, but in several parts of the coast it is hilly. **Ben Nevis**, in the Scottish Highlands, is the highest mountain in Great Britain, being 4,400 feet in height.

### 5. Rivers and Lakes.

The rivers of the British Isles are small streams. The most important of them are :—

- (1) The **Shannon**, the largest river of the British Isles, flowing through Ireland ;
- (2) the **Thames**, in the south-east of England ;
- (3) the **Severn**, in the west of England ;
- (4) the **Humber**, in the north-east of England ;
- (5) the **Tay**, in the east of Scotland ;
- (6) the **Clyde**, in the west of Scotland.

Scotland and Ireland contain many fresh-water lakes, of which the largest is *Lough Neagh*, in Ireland.

### 6. Government and Population.

The British Isles were formerly divided into four separate kingdoms—England, Scotland, Ireland, and Wales. By and by these four kingdoms became one, and came to be called the United Kingdom of Great Britain and Ireland. The **Parliament** is the assembly that makes laws for the whole nation, and the government consists of the Sovereign, the Lords, and the Commons. The population of the British Isles is over 45 millions.

### 7. Divisions.

England and Wales are divided into 32 counties, of which 20 belong to England and 12 to Wales. Scotland

has 33 counties and Ireland 32. Ireland is divided into the four ancient provinces of **Ulster, Munster, Leinster,** and **Connaught**. Scotland is naturally divided into the **Highlands** and the **Lowlands**. The counties of England are grouped together as the Northern Counties, the Midlands, the Eastern Counties, the South, and the West.

#### 8. European Possessions.

- (1) The Channel Islands, consisting of **Jersey, Guernsey, Alderney, and Sark**, near the north coast of France ;
- (2) **Gibraltar**, at the entrance to the Mediterranean between Spain and Africa ;
- (3) **Malta and Gozo**, in the Mediterranean, between Sicily and the coast of Africa.

#### 9. Products and Industries.

##### (a) *Agricultural Products*—

The principal grain crops are *wheat, barley,* and *oats*, grown chiefly in the plains of the Midlands and Eastern Counties, the Lowlands of Scotland, and the central plain of Ireland.

##### (b) *Mineral Products*—

(i) *Coal and Iron*—obtained in the Scottish Lowlands, the north of England and Northern Midlands, and South Wales ;

(ii) *Copper, Tin, and Lead*—obtained in Cornwall and Derbyshire, in the west and centre of England, respectively ;

(iii) *Salt*—obtained in Cheshire and Worcestershire, on the borders of Wales.

(c) *Manufactures*—

(i) Iron and steel manufactures of all kinds, from pins and needles to steam engines, railway bridges and great iron ships.

(ii) The *copper* manufacture of Swansea ;

(iii) the *brass* manufacture of Birmingham ;

(iv) the *pottery* of Stoke-upon-Trent ;

(v) the *chemicals* of Lancashire and the Tyne ;

(vi) the *woollen goods* of Yorkshire and the west of England ;

(vii) the *cotton manufacture* of Lancashire ;

(viii) the *linen* of Ulster in Ireland ;

(ix) the *jute* manufacture of Dundee in Scotland.

In manufactures England occupies the first place in the markets of the world.

### 10. Trade and Commerce.

The export trade consists almost entirely of manufactured articles, and the import trade of food and raw materials, such as cotton, wool, jute, hide, &c. This trade is carried on by a very large number of ships and steamers, of which England possesses nearly as many as all the other countries of the world together.

### 11. Means of Communication.

All the towns and villages are joined by good roads with bridges over the rivers in every part of the country. The Railways are very numerous, so much so that there is no place in the whole of England which is more than five or six miles away from a railway station. Some of these railways run under the ground, and some of them

are built overhead, so that three or four different lines may pass over the same spot without any danger of collision.

## 12. Chief Towns.

### (a) *Of England.*—

(1) **London**, the capital of the British Isles, is the largest city in the world, being about 20 miles from east to west, and 10 or 12 from north to south. The total population is nearly 50 lakhs, or more than that of all the large towns of India taken together. London is the centre of the world's commerce and the world's banking.

(2) **Liverpool**, an important seaport on the west coast.

(3) **Newcastle**, in the north-east, exports large quantities of coal, iron, and chemicals and has a large shipbuilding trade.

(4) **Bristol**, on the river Avon, is another important seaport.

(5) **Southampton**,  
(6) **Plymouth**,  
(7) **Hull**, } other important seaports.

(8) **Manchester**, in Lancashire, is the centre of the cotton trade.

(9) **Birmingham**, in Warwickshire, is the centre of the trade in metal work.

(10) **Sheffield**, is the centre of the trade in cutlery and steel.

(11) **Leeds**,  
(12) **Bradford**, } centres of woollen manufacture.  
(13) **Oxford**,  
(14) **Cambridge**. } seats of the two ancient Universities of England.

### (b) *Of Scotland.*—

(1) **Edinburgh**, the capital of Scotland, and the seat of a University.

- (2) **Glasgow**, in the west, is the centre of the ship-building trade, and the seat of a University.
- (3) **Dundee**, is the seat of the jute trade.

*(c) Of Ireland.*—

- (1) **Dublin**, the capital, is now a declining city.
- (2) **Belfast**, in the north, is the centre of the linen trade.

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### QUESTIONS.

- 1. Describe accurately the position of Great Britain and Ireland and give the area of the three countries composing it.
- 2. Name the important seas and gulfs lying on the coast of the British Isles, and the principal islands connected with it.
- 3. What is the general character of the surface of Great Britain and Ireland?
- 4. Name the most important rivers and lakes of the British Isles.
- 5. Describe the government of the United Kingdom.
- 6. Into how many divisions are the British Isles divided?
- 7. Name the dependencies of Great Britain situated in Europe.
- 8. Name the principal products and industries of Great Britain.
- 9. What are the chief exports and imports of the United Kingdom?
- 10. Describe the means of communication existing in Great Britain.
- 11. Name three of the chief towns of England, Scotland and Ireland.

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## CHAPTER VIII. OTHER EUROPEAN COUNTRIES.

### I.—France.

- 1. **Physical Features.**—Much of France resembles England in physical features, being level in some places



and hilly in others. On one side it is bounded by the *Alps*, and on another by the *Pyrennees*. On the north, west, and south it is washed by the sea.

2. **Rivers.**—(1) The **Seine**, falling into the English Channel ;

(2) the **Loire**, } falling into the Bay

(3) the **Graonne**, } of Biscay ;

(4) the **Rhone**, falling into the Mediterranean.

3. **Islands.**—The island of Corsica belongs to France.

4. **Population.**—The population is  $39\frac{1}{2}$  millions.

5. **Products and Industries.**—Most of the crops grown in England are also grown in France. But France is chiefly famous for its wines. Its manufactures, especially those of wool and silk, are also important.

6. **Chief Towns.**—(1) **Paris**, the capital of France, is the best built and finest city in the world.

(2) **Marseilles**, an important seaport on the Mediterranean.

(3) **Bordeaux**, } are other impor-

(4) **Havre**, } tant seaports.

(5) **Lyons**, } important manufac-

(6) **Rouen**, } turing towns in the interior.

## II.—Germany.

1. **Boundaries.**—Germany or the German Empire is bounded on the *north* by the North Sea, Denmark, and the Baltic ; on the *east* by Russia ; on the *south* by Austria and Switzerland ; and on the *west* by France, Belgium, and Holland.



2. **Physical Features.**—The north and east are level ; the centre and south consist of a tableland interspersed with ranges of mountains.

3. **Rivers.**—The principal rivers are :—

- (1) the Rhine, on the west ;
  - (2) the Vistula, on the east ;
  - (3) the Weser,
  - (4) the Elbe,
  - (5) the Oder,
- } in the centre.

4. **Population.**—The population is about 65 millions, and the people are famous for their learning

5. **Chief Towns.**—

- (1) Berlin, the capital ;
- (2) Dresden, in the province of Saxony ;
- (3) Munich, the chief town of Bavaria ;
- (4) Cologne, on the Rhine ;
- (5) Hamburg, an important seaport near the mouth of the Elbe ;
- (6) Bremen, another seaport on the Weser ;
- (7) Danzig, a seaport on the Vistula.

### III.—Austro-Hungary.

1. **Boundaries.**—Austro-Hungary, consisting of the empire of Austria and the kingdom of Hungary, is bounded on the *north* by Germany and Russia ; on the *east* by Russia ; on the *south* by Turkey, the Adriatic, and Italy, and on the *west* by Italy, Switzerland, and Bavaria.

2. **Physical Features.**—The greater part of the country is an extensive plain, but in the west of Austria are the Alps, and in the east of Hungary the Carpathian Mountains.

3. **Rivers.**—The greatest of these is the **Danube**, which flows through the centre and drains the greater part of the country. The northern provinces contain the upper courses of the Dniester, Vistula, and Elbe.

4. **Population.**—The population of the whole country is  $49\frac{1}{2}$  millions.

5. **Chief Towns.**—(1) **Vienna**, the capital of Austria, on the Danube;

(2) **Buda-Pest**, capital of Hungary, on the Danube ;

(3) **Trieste**, an important seaport at the head of the Adriatic Sea.

#### IV.—Russia.

1. **Boundaries.**—Russia in Europe is bounded on the *north* by the Arctic Ocean ; on the *east* by the Ural Mountains, the Ural river, and the Caspian ; on the *south* by the Caucasus Mountains, the Black Sea, Roumania and Austria ; and on the *west* by Austria, Prussia, the Baltic Sea and Sweden.

2. **Extent.**—European Russia is about as large as all the other countries of Europe taken together, the total area being 2,100,000 square miles.

3. **Physical Features.**—Russia is one immense plain with hardly a single elevation except the **Valdai Hills**. Communications through the country are very difficult, and long journeys have to be made by driving over bad roads or going on foot.

4. **Rivers and Lakes.**—(1) The **Volga**, flowing into the Caspian Sea ;

(2) the **Don**, flowing into the Sea of Azov;

(3) the <b>Dnieper</b> ,	} flowing into the Black Sea ;
(4) the <b>Dniester</b> ,	
(5) the <b>Vistula</b> ,	} flowing into the Baltic Sea ;
(6) the <b>Duna</b> ,	
(7) the <b>Neva</b> ,	

(8) the **Dwina**, flowing into the White Sea.

*Lakes.*—In the north are many lakes, the largest of which are Ladoga and Onega, drained by the Neva.

5. **Population.**—The population is over 118 millions. The people are behind the rest of Europe in civilization.

6. **Chief Towns.**—(1) **St. Petersburg**, the capital, at the mouth of the Neva;

(2) **Moscow**, the old capital, in the centre;

(3) <b>Nijni Novogorod</b> ,	} on the Volga ;
(4) <b>Kazan</b> ,	
(5) <b>Astrakhan</b> ,	

(6) **Kiev**, on the Dnieper;

(7) **Warsaw**, on the Vistula ;

(8) **Odessa**, a seaport on the Black Sea ;

(2) **Riga**, a seaport on the Baltic ;

(10) **Archangel**, a seaport on the White Sea.

## V.—Norway and Sweden.

1. **Position and Extent.**—Norway and Sweden form the western and eastern parts respectively of the Scandinavian peninsula. The area is nearly 300,000 square miles, being the second largest country in Europe.

2. **Physical Features.**—Norway is one of the most mountainous countries in Europe. The coast is indented

by deep bays, skirted by innumerable rocks and islets. In Sweden the sea-coasts are flat, but the interior rises by terraces towards Norway.

3. **Population.**—The population is only about  $7\frac{3}{4}$  millions, for the country is too unproductive to support a larger. Dairy farming, fishing, and navigation are the chief pursuits of the people.

4. **Chief Towns.**—(1) **Stockholm**, capital of Sweden;  
(2) **Christiana**, capital of Norway.

#### VI.—Denmark.

1. **Position and Extent.**—Denmark consists of the peninsula of Jutland and several islands in the narrow seas between the Baltic and the North Sea. The large island of Iceland and the Faroes, north of Scotland, belong to Denmark, which has settlements also in Greenland and the West Indies.

2. **Population.**—The population is about  $2\frac{3}{4}$  millions. The people are great sailors and adventurers, and have made many foreign settlements both in ancient and modern times.

3. **Chief Towns.**—(1) **Copenhagen**, the capital, on the Sound ;  
(2) **Elsinore**, a fortress at the narrowest part of the Sound.

#### VII.—Holland.

1. **Position and Extent.**—Holland, or the Netherlands, is a small kingdom at the mouth of the Rhine. The area is just over 20,000 square miles.

2. **Physical Features.**—The country is very flat and low, and large portions of it are below the sea-level, and are protected by embankments.

3. **Population.**—The people number nearly 6 millions. They are called the **Dutch**, and like the English they are fond of the sea, and have made many settlements in foreign lands, especially in Java and other islands south of Asia.

4. **Chief Towns.**—(1) The **Hague**, the capital ;

(2) **Amsterdam**, the greatest commercial town ;

(3) **Rotterdam**, a great seaport.

#### VIII.—Belgium.

1. **Position and Extent.**—South of Holland lies the small kingdom of Belgium, with an area of about 11,000 square miles.

2. **Physical Features.**—The surface is flat except in the south. The principal rivers are the **Meuse** in the east, and the **Scheldt** in the west.

3. **Population.**—Belgium is the most thickly-populated country in Europe. The population is  $6\frac{3}{4}$  millions, giving an average of 590 inhabitants to the square mile. The people are exceedingly industrious both in agriculture and manufactures.

4. **Chief Towns.**—(1) **Brussels**, the capital, in the centre of the country ;

(2) **Antwerp**, the chief seaport ;

(3) **Ghent**, famous for its cotton manufactures.

#### IX.—Switzerland.

1. **Position and Extent.**—Switzerland is a small republic in the centre of Europe, surrounded by the Alps and Jura mountains.

2. **Physical Features.**—Switzerland is the most mountainous and elevated country in Europe. It has many fine lakes and snow-clad peaks, and resembles Kashmir in many respects.

3. **Population.**—The population is about  $3\frac{3}{4}$  millions. The people are thrifty and hard-working.

4. **Chief Towns.**—(1) **Bern**, the capital, in the centre of the country ;  
(2) **Geneva**, on the Rhone, is famous for its watches.

### X.—Italy.

1. **Position and Extent.**—Italy is a narrow peninsula, shaped like a long boot, in the south of Europe. The large islands of Sicily and Sardinia belong to it. The area is about 1,10,000 square miles.

2. **Physical Features.**—The **Alps** form the northern boundary of the country, and the **Appenines** chain runs down the centre. There are also some large plains in the country, such as the **Plain of Lombardy** and the **Campagna of Rome**.

3. **Rivers.**—Owing to its shape, Italy has no great rivers, except the **Po** in the north, and the **Tiber**, on the banks of which Rome is built.

4. **Population.**—The population is  $34\frac{1}{2}$  millions. The people are the descendants of the ancient Romans who were at one time the foremost people in the world.

5. **Chief Towns.**—(1) **Rome**, the capital, on the river Tiber ;  
(2) **Venice** } both important  
(3) **Genoa** } seaports ;  
(4) **Florence**, famous for its works of art ;

- (5) **Naples**, a university town on the Bay of Naples ;
- (6) **Milan**, north of the Po ;
- (7) **Turin**, on the Po.

### **XI.—Spain and Portugal.**

1. **Position and Extent.**—Spain and Portugal form the eastern and western portions respectively of the Iberian peninsula. The total area is about 23,000 square miles, Spain being the larger of the two.

2. **Physical Features.**—The greater part of the country is a high tableland with a barren soil, but there are some broad and fertile valleys round the coasts. The principal mountain ranges are the **Pyrenees**, in the north, and the **Sierra Nevada** in the south.

3. **Rivers**—
- |   |                                     |
|---|-------------------------------------|
| (1) The <b>Guadalquivir</b> ,                         | } falling into the Atlantic Ocean ; |
| (2) the <b>Guadiana</b> ,                             |                                     |
| (3) the <b>Tagus</b> ,                                |                                     |
| (4) the <b>Douro</b> ,                                |                                     |
| (5) the <b>Ebro</b> , falling into the Mediterranean. |                                     |

4. **Population**—The population of Spain is 19½ millions ; that of Portugal about 5½ millions. Three or four hundred years ago the people of Spain and Portugal were the most enterprising and powerful nations of Europe, especially on the sea. The Portuguese discovered the route to India, and the Spaniards discovered America and made many settlements there.

5. **Chief Towns.**—(1) **Madrid**, capital of Spain, in the centre ;
- (2) **Lisbon**, capital of Portugal, on the Tagus



- (3) **Seville**, the ancient capital of Spain, on the Guadalquivir ;
- (4) **Cadiz**, a fortified seaport on the Mediterranean ;
- (5) **Barcelona**, the chief manufacturing and commercial town of Spain ;
- (6) **Coimbra**, near the centre, is the seat of the only university in Portugal.

## XII.—The Balkan Peninsula.

1. **Turkey**.—Turkey is the only non-Christian state in Europe. At one time it bore sway over the whole of the Balkan Peninsula as far as the Danube, but now it only owns the provinces of **Macedonia**, **Albania**, and **Roumania**. The Sultan of Turkey also rules **Candia** and several of the Grecian islands. The chief *river* is the Danube, and the population is over 6 millions. The capital is **Constantinople**.
2. **Greece**.—Greece lies in the south of the Balkan Peninsula, and almost coincides with ancient Greece, which was so famous for its literature, art, and philosophy. The population is nearly  $2\frac{1}{2}$  millions. The capital is **Athens**.
3. **Servia**.—Servia is a small kingdom south of the Danube, and was formerly under the dominion of Turkey. The area is about 18,000 square miles, and the population about 3 millions. The capital is **Belgrade**.
4. **Roumania**.—Roumania lies between Russia on the north and east, Hungary on the west, and Bulgaria on the south. It has an area of 18,000 square miles, and a population of nearly 6 millions. The capital is **Bukharest**.

5. **Bulgaria.**—Bulgaria is a small principality on the northern slopes of the Balkans. It has an area of 38,000 square miles, and a population of  $4\frac{1}{2}$  millions. The capital is **Sofia**.

6. **Montenegro.**—Montenegro is a small principality in the Dinaric Alps. The area is 3,600 square miles, and the population 250,000. The capital is **Cetinje**.

### QUESTIONS.

1. Name the countries of Europe with their capital towns.
2. Compare the British Isles with France, in point of population, products, and industries
3. Name the chief towns of the German Empire.
4. Give the geographical boundaries of Austro-Hungary, and name the chief towns. Explain the term "Austro-Hungary."
5. Describe the physical features of Russia in Europe, and name the chief rivers and the principal towns.
6. Compare Norway and Sweden in respect of their physical features.
7. Where is Denmark? Write what you know about it.
8. In what respect are Holland and Switzerland unique among the countries of Europe?
9. Describe the shape and physical features of Italy, and name anything of interest which you know about the country.
10. Give a short geographical account of Spain and Portugal, mentioning anything of interest that you know about the people.
11. Where is the Balkan Peninsula? Name the States that are situated in it.
12. Where are Servia and Bulgaria? What do you know of them?
13. In what respect is Turkey unique among the countries of Europe?
14. What and where are the following :—Rouen, Weser, Danzig, the Adriatic, Trieste, the Dwina, Kiev, Elsinore, the Hague, Ghent, Campagna, Lombardy, Turin, the Ebro, Coimbra, Bukharest, and Montenegro.

THE END.

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Printed by Pt. Janki Nath Sharga at the "Leader Press", Allahabad.